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TREATMENT AND PACKAGING OF PRE-PEELED POTATOES¹

R. H. TREADWAY AND R. L. OLSON²

Potatoes are no exception in the general trend toward increased merchandising of fruits and vegetables in pre-packaged form. Small packs put up in transparent film bags and in paper sacks with cellophane "windows" are in popular demand. Newer still are dry packs of uncooked peeled potatoes. Although pre-peeled potatoes have not yet become a regular item in retail markets, their use for institutions is well established. Use of foodstuffs ready for cooking is an important factor in streamlining methods of operation.

Pre-peeled potatoes were first produced for the restaurant trade more than 20 years ago. The potatoes were delivered in metal containers in which they were immersed in water or salt solution. Distribution of peeled potatoes in dry-pack form was started in or about 1936. After the close of World War II, the industry spread rapidly until nearly all metropolitan centers of the country had one or more processors. It has been difficult or impossible to collect accurate statistics concerning the industry because there have been frequent changes. It is not unusual, however, for any new industry to have a number of failures. There are indications at present, that the industry has become stabilized and that the better processors have survived the introductory phase.

It is estimated that 1½ to 2 million bushels of potatoes are used annually by the pre-peeled potato industry. A few of the largest processors reportedly produce about 250,000 pounds of finished product per week during peak periods. Several process 60,000 to 80,000 pounds weekly. Smaller processors turn out 15,000 to 20,000 pounds of product a week.

Restaurateurs find it good business to pay 4 to 6 cents a pound above the price of unpeeled potatoes for the pre-peeled product because they (a) save labor and purchase of equipment; (b) save storage space; (c) reduce the amount of garbage handled; (d) have peeled potatoes always available, particularly French-fry slices; (e) pay for their peeling loss in advance and thereby know what it is; (f) have potatoes of better quality than ordinary unpeeled potatoes; (g) purchase potatoes at a more stable price throughout the year than is possible in the ordinary market, which fluctuates from day to day.

Raw Material

It is advantageous, perhaps essential, for the pre-peeler to have well rounded experience in the marketing and handling of potatoes. Processing costs (peeling and trimming losses, labor expense, and wastage from rot) are related to the quality of potato. Therefore, the cost of processing a second-grade potato may be such that the initial price savings over top-

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²Eastern Regional Research Laboratory,* Philadelphia 18, Pa. and Western Regional Research Laboratory,* Albany, 6, California, respectively.

*Laboratories of the Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, United States Department of Agriculture, Washington, D. C.

quality raw material cannot be justified. Careful analysis of cost factors that may be affected by the quality of potatoes purchased (tuber size, depth of eyes, uniformity of size and shape, and freedom from rot and mechanical damage) must be made to determine an advantageous price to be paid for any given lot of potatoes. Furthermore, the cooking quality of an available supply of potatoes should be known before a purchase is made. The simplest method is to sample potatoes from several sacks and cook them to see if they will conform to the needs of the ultimate consumer. Of particular importance is the tendency of some potatoes to darken on French frying. Frequently, if potatoes have been in cold storage for an extended period, they tend to have a high reducing sugar content which will cause an unduly dark product when they are fried. Warm storage (70° F.) for a period varying from 2 to 3 weeks will usually convert excess reducing sugar to starch and remedy the situation. The risk to the pre-peeler must be calculated with due regard to costs and other supplies that may be available. In short, the pre-peeler must become a purchasing agent, seeking an optimum price and quality of raw material for his customers. This is a part of the service he sells along with the product.

Final preparation of the raw material before peeling will frequently include thorough washing to remove dirt although in many cases the potatoes are fed into mechanical peelers in the condition in which they are purchased. Compartmented, trough washers of the type manufactured for users of potatoes in the food processing and starch industries are used.

Peeling

Substantially, the economy of the pre-peeled potato industry is based on the fact that peeling waste is less in a central peeling plant than in small operations. Hand paring is extremely wasteful. Losses in small-scale peeling, even with mechanical equipment run as high as 40 per cent, as compared with perhaps 20-25 per cent in a central peeling plant.

Three types of peeling — steam, lye, and abrasion — are employed in central peeling plants. In the steam and lye methods, the skin is loosened by the treatment and then removed by a light mechanical rubbing action while jets of high-pressure water play on the potatoes. In abrasion peeling, the skin is ground away as the potatoes come in contact with rough surfaces while being tumbled in a drum. Regardless of the peeling method, the remaining bits of skin and dark spots are removed by hand trimming as the potatoes move along an inspection table.

It is likely that the advantages and disadvantages of these three methods of peeling make one about as good as another. Some large operators feel that steam and lye peeling are more economical than abrasion, since they remove less of the tissue underneath the skin. Mazzola (2) reported that a survey of large processors of potatoes (in dehydrating and canning, primarily) showed that the least loss is entailed in high-temperature lye peeling. Batch steam peeling resulted in greater loss, and abrasion peeling caused the greatest loss. Various factors, however, may change these relationships in certain instances. The original investment for equipment is usually higher for steam and lye peeling than for abrasion peeling.

High-temperature operations (steam and lye) must be closely controlled to avoid cooking the potato tissue to excessive depth. This would be unobjectionable in potatoes that are to be cooked immediately in a food processing plant, but a cooked surface is undesirable in a product to be merchandised as raw, pre-peeled potatoes.

Varietal characteristics are such that some potatoes (notably, the White Rose variety) cannot be used for mashed potatoes following high-temperature peeling and a few days' storage. The cooked layer becomes so tough that it will not break up in mashing operations and leaves undesirable lumps. Replacement of expensive equipment and even business failure have resulted from the difficulties of maintaining a high-quality peeled potato with high-temperature peeling methods.

In lye peeling, operations must also be so controlled to leave no perceptible alkali after the peeled potatoes are washed. Various types of potato discoloration, sometimes accompanying lye peeling, constitute still another problem.

Although peeling losses in abrasion peeling are frequently large, this method is usually preferred by smaller processors because the equipment is not only less expensive but more nearly foolproof. Wright and Whiteman (4) showed that processors can avoid much waste by selecting proper varieties from the best sources and properly timing the operation of their peelers. Choosing potatoes that are uniform in size, as well as having a minimum amount of cavities and depressions, is particularly important in abrasion peeling. Potatoes with deep eyes must either be left in the peeler until the skin is removed from the low spots or be subjected to extensive hand trimming. Wright and Whiteman found that the best stock lost 14-20 per cent of its weight in 2 minutes of abrasion peeling. Potatoes least desirable because of shape and irregular surface lost 25-37 per cent under the same conditions.

Treatments

Upon exposure to air, raw, peeled potatoes quickly turn reddish-brown and finally dark grey or black. This discoloration is caused by the action of an enzyme system, which in the presence of oxygen, catalyzes the oxidation of certain substances in potato juice to form a series of colored compounds. A solution of a bisulfite salt or of sulfur dioxide inhibits the action of this enzyme system and also counteracts by its reducing action the formation of the colored compounds.

A short dip in a dilute solution of the treating agent preserves the original whiteness of peeled potatoes. It is impossible to give optimum conditions of treatment, because differences in raw material, processing equipment, operating methods, packaging material, and storage practices affect the results. The following directions, however, will serve as a guide: Dip for 30 seconds in a solution of 0.5 per cent sodium bisulfite and 0.5 per cent citric acid (3). Such a mixture of bisulfite and acid in water gives sulfur dioxide. A longer dipping time or a stronger solution, particularly with respect to the bisulfite strengthens the preservative action, but over-treatment may cause off-flavor in the product. Excessive acid may cause juice to leak from the potatoes.

The potatoes are usually graded for size at some stage prior to the color-stabilizing treatment. Small potatoes are treated whole for later use

in boiling, mashing, or roasting. Large potatoes are sliced for frying. It is estimated that two-thirds to three-fourths of the over-all production of pre-peeled potatoes is in French-fry slices. Processors sell the sliced potatoes at the same price or slightly above that of whole potatoes.

Stronger treatment is required for whole potatoes than for sliced potatoes. One processor found that his unsliced potatoes absorbed only about one-fifth as much sulfur dioxide as slices under identical treatment. There is a wide range in the residual sulfur dioxide content of pre-peeled potatoes, based on information received from various processors and on our determinations. The product should have at least 70 to 100 parts per million of sulfur dioxide for adequate protection against discoloration. A residual sulfur dioxide content of 140-150 parts per million will permit a greater safety factor. Some of the sulfur dioxide is dissipated during cooking.

Labeling is required by the Federal Food and Drug Administration when sulfur dioxide or salts producing sulfur dioxide are used in foods destined for sale in interstate commerce. The use of sulfur dioxide is allowed by the Federal agency, provided the preservative is not added to conceal damage or inferiority. Several states, however, have additional restrictions on the use of sulfur dioxide.

There is a secret process for treating peeled potatoes. Although proponents of this secret treatment admit that it is more expensive than acidified bisulfite, they claim that it causes no off-taste, whereas high residual sulfur dioxide gives the product an off-flavor.

C. R. Havighorst (1) has given a detailed description of one type of mechanized line for processing pre-peeled potatoes. Because the integrated equipment described in this reference is one of the first lines developed for pre-peeled potatoes, it does not represent the latest in design and simplification. Equipment is available from several manufacturers for carrying out a synchronized process, including sorting the potatoes into various sizes, washing, continuous peeling, trimming along a conveyor belt, and treating with the solution to prevent discoloration.

After the color-stabilizing treatment, the potatoes are drained and sometimes exposed to a draft of air to remove excess surface water. They are then bagged and weighed. In these operations, automatic or semi-automatic equipment is used.

Packaging and Handling of Finished Product

To the best of our knowledge all pre-peeled potatoes produced at present are for restaurants, hotels, and institutions. Scattered attempts have been made to retail 1 to 2 pound packs in transparent or translucent film packages. Some processors feel that the item cannot be retailed profitably under present conditions.

Others believe a potential retail market exists far in excess of that now available in the restaurant and institution trade and awaits only the improvement of techniques to provide a surer and longer refrigerated storage life and an adequate campaign of consumer education.

Bags fabricated from cellophane, "Pliofilm,"* and polyethylene have been used in packaging pre-peeled potatoes in the retail merchandising

*Mention of products does not imply recommendation or endorsement by the United States Department of Agriculture over similar products not mentioned.

ventures. Several types of packaging are used in wholesale distribution of the product. Regardless of the type of packaging, there are apparently three guiding principles to be followed in handling peeled potatoes from the time they leave the treating bath until they are finally prepared for the table: 1. The potatoes should be kept cool, that is, in the temperature range of 32° to 40° F.; 2. although the potatoes are packed in air, the container should be fabricated of a material that is relatively impermeable to gases and it should be tightly closed to prevent the entry of additional air that would reduce the effectiveness of the treatment; 3. dehydration of the product should be avoided, since surface drying may adversely affect texture. Attention to the first and second conditions will go far toward insuring realization of the third.

Some processors put up an institution pack (35 pounds net weight) of peeled potatoes in wooden apple boxes lined with wax paper. Such containers are economical in that they can be re-used after the lining is replaced. It is difficult, however, to exclude air currents from the contents of such a package. Moreover, the sanitation problem is much more difficult when peeled potatoes are packed in re-usable containers than when "one trip" packaging is used.

Several processors put up 30- and 60-pound packs of peeled potatoes in polyethylene bags enclosed in 2-ply kraft paper bags. Others use heavy, multiple-wall paper bags for 30-pound packaging. The multiple-wall bags are comprised of the following components: A kraft outer layer; a 2-ply, thin kraft, asphalt-laminated center; and a white, high wet-strength inner liner. Still other processors employ a double-wall bag consisting of heavy kraft on the outside and a white, high wet-strength inner liner on the inside.

In sealing, film bags are usually closed with metal crimpers. Paper bags are closed by folding the top under and stapling.

Peeled potatoes are kept under refrigeration at the processing plant until delivery to the institution. Deliveries are made in insulated trucks that are either refrigerated or pre-cooled. The restaurateur refrigerates the product until it is used. Under normal conditions of distribution, pre-peeled potatoes are used within 1 week from the time of processing. High-quality potatoes, processed under favorable conditions and containing residual sulfur dioxide in the neighborhood of 100 parts per million, should be expected to remain in good condition for 1 week, including a short period in transit from processor to restaurant.

Lack of high standards of sanitation on the part of some processors constitutes a neglected phase in processing and handling of pre-peeled potatoes. Failure to conform to strict sanitary practices has undoubtedly caused the downfall of several processors in the industry. In cold weather, the careless processor may get by temporarily with sloppy methods of housekeeping and handling of the product, but in mild or warm weather such ignorance or neglect is certain to result in peeled potatoes of poor keeping quality.

"Par-Fried" Potatoes

Sliced potatoes for French frying in the "par-fried" form have recently been offered to the restaurant trade. Such sliced potatoes are not dipped in a treating solution but depend on the blanching action of hot oil to inactivate the enzyme system. Par-fried potatoes are potatoes fried

for several minutes in the processing plant to the point at which the slices start to brown. The slices are then drained, packaged similarly to uncooked peeled potatoes, and kept under refrigeration until ready for final preparation in the restaurant. In 1 to 2 minutes of final frying, par-fried potatoes are converted into French-fried potatoes of the usual moisture content and golden brown color.

Par-fried potatoes sell for approximately twice the price of uncooked peeled potatoes. The higher price is justified because they have a much lower moisture content than uncooked potatoes and contain appreciable fat. The fact that they can be quickly cooked to finished French-fried potatoes is also used as a selling point, since by this means they can be prepared rapidly on order and the demands during rush hours of restaurant operations can be met easily.

Little research has been carried out on packaging and marketing of raw peeled potatoes, particularly for retail sale. Research is needed to answer the following questions with respect to retail merchandising: (a) What type of packaging material is best? (b) Which size or sizes of package are preferred by consumers? (c) What type of peeled potato is most desired? (d) What price relationship and competition exists relative to other fresh and processed vegetables?

More general unknown points include the following: (a) Limitations of minimum and maximum sizes for economical operation of a central peeling plant; (b) maximum area that can be covered in servicing wholesale customers by trucks.

Summary and Conclusions

Restaurateurs now recognize the well-established pre-peeled potato industry as a good source of potatoes to fill all their needs except for baking. The present methods of preserving peeled potatoes against discoloration are adequate to meet the demands of the restaurant and institution trade. Such difficulties as keeping the product in good condition for the longer time required in retail merchandising, and adequately educating consumers concerning the product, are preventing the distribution of pre-peeled potatoes in consumer packs.

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SOME EFFECTS OF MALEIC HYDRAZIDE ON
STORED POTATOES¹E. W. FRANKLIN² AND N. R. THOMPSON³

INTRODUCTION

MH (maleic hydrazide) when applied to potato foliage often produces different reactions. The response varies with the concentration and the time of application.

Denison (2) found that yields were reduced when the concentrations were increased from 375 to 6000 ppm. He also found that high rates of application resulted in small misshaped tubers.

Kennedy and Smith (3) reported an increased tuber set from a concentration of 1.1 per cent of MH applied to the Sebago variety at the time of tuber set. However, the tubers were malformed and the foliage was stunted.

Patterson *et al* (4), using concentrations of 1000 to 2500 ppm of MH one to seven weeks prior to harvest, were able to prolong the dormancy of tubers. Also, less reducing sugars accumulated in the treated potatoes.

Wittwer and Patterson (5) eliminated sprouting of potatoes stored for seven months at 45° F. by foliar applications of 2500 ppm of MH. The treated potatoes made better potato chips than those not treated.

The present studies were undertaken to determine some of the effects of MH on Katahdin potatoes under Ontario conditions.

MATERIALS AND METHODS

MH* sprays were applied at concentrations of 1250, 2500, and 5000 ppm to Katahdin potatoes on August 2, 1951, with a tractor-drawn, six-row power sprayer. The potatoes were planted on April 23 (maturity 5), May 1 (maturity 4), May 9 (maturity 3), May 23 (maturity 2), and June 2 (maturity 1). The maturities were designated 5 to 1, because at the time of harvest the tubers from the June 2 planting were least mature. Orvus (0.5 per cent) was used as a wetting agent.

At the time of MH application the foliage of the potatoes which had been planted on April 23 was showing signs of maturity, and the potatoes which had been planted on June 2 were just past full bloom.

All plots were harvested on October 13, 1951. The following data were recorded: yield, specific gravity by Bewell hydrometer method (1), cooked color by immersion in alcohol (6), and flavor by the organoleptic method.

A 15-pound sample from each plot was stored at (a) 32° F. and 75 per cent RH (relative humidity) in a refrigerated storage; (b) 40° F.

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²Assistant Professor of Horticulture, Ontario Agricultural College.

³Horticulturist, Co-operative Potato Investigations, Ontario Agricultural College, Department of Horticulture, Guelph, Canada.

*Formulated as a water soluble diethanolamine salt containing 30 per cent MH by weight, courtesy of Naugatuck Chemicals.

and 90 per cent in an automatically ventilated common storage; (c) 50° F. and 78 per cent RH in a refrigerated storage; and (d) in a house cellar with an average temperature and RH of 45° F. and 85 per cent, respectively. Weights were recorded to the nearest half-ounce. Relative humidity was measured with a Serdex hygrometer** which had been calibrated with a wet-and-dry-bulb psychrometer.

On May 6, 1952, after six months of storage, the following data were recorded: weight loss, sprout weight, specific gravity, cooked color, and flavor.

RESULTS

Before Storage

There were no visible effects on the foliage from any of the applications of MH. The tubers from all treated plots were normal in appearance. An analysis of variance revealed no significant differences in yields, specific gravities, cooked color ratings, and flavor scores.

After Storage for Six Months

Sprout Growth

Sprouting did not occur on tubers stored for 6 months at 32° F. as shown in figure 1, and was insignificant on both the control and treated samples stored for a similar length of time at 40° F. Maximum sprouting occurred on the more mature potatoes stored at 45° and 50° F. as is noted in figure 2. The behavior of the control samples seems to indicate that the more mature the potatoes at time of harvest the sooner they sprout in storage. The degree of sprout inhibition depended upon the concentration of the MH and the maturity of the tubers. Sprout growth was inversely proportional to the concentration of MH but increased with increasing maturity as shown in figure 3.

MH was most effective as a sprout inhibitor when sprayed on the potatoes immediately after full bloom, as you will note in table 1. An application of 2500 ppm. at this stage almost completely inhibited sprouting. At later stages of growth a concentration of 5000 ppm. was necessary to inhibit sprouting satisfactorily. Applications of 1250 ppm. did not result in good sprout control.

TABLE 1.—Percentage reduction in sprouting of Katahdin potatoes after being treated with MH and stored for six months at 45° F.

Date of Planting	Maturity	1250 ppm	2500 ppm	5000 ppm
June 2	1	54.2	93.8	100.0
May 23	2	56.8	80.7	96.0
May 9	3	70.0	85.6	92.2
May 1	4	53.1	56.6	91.2
April 23	5	61.5	70.5	85.3

**Manufactured by Serdex Inc., Boston.



FIGURE 1.—The comparative effect of foliar applications of MH at three concentrations on the amount of sprouting of five maturities of Katahdin potatoes stored for six months at 32° and 40° F, respectively.

Weight Loss

That MH significantly affected weight loss is shown in figure 3. All treated samples showed less loss than the control samples, but the weight losses increased with increasing concentrations of MH. It would appear that the greater weight loss in the control samples was caused by the



FIGURE 2.—The comparative effect of foliar applications of MH at three concentrations on the amount of sprouting of five maturities of Katahdin potatoes stored for six months at 45° (house-cellar) and 50° F.

excessive sprout development. At the present time no explanation is apparent for the increased weight losses associated with the increased concentrations of MH.

There was a significant relationship between storage temperatures and weight loss. The vapor pressure deficits of the respective storages

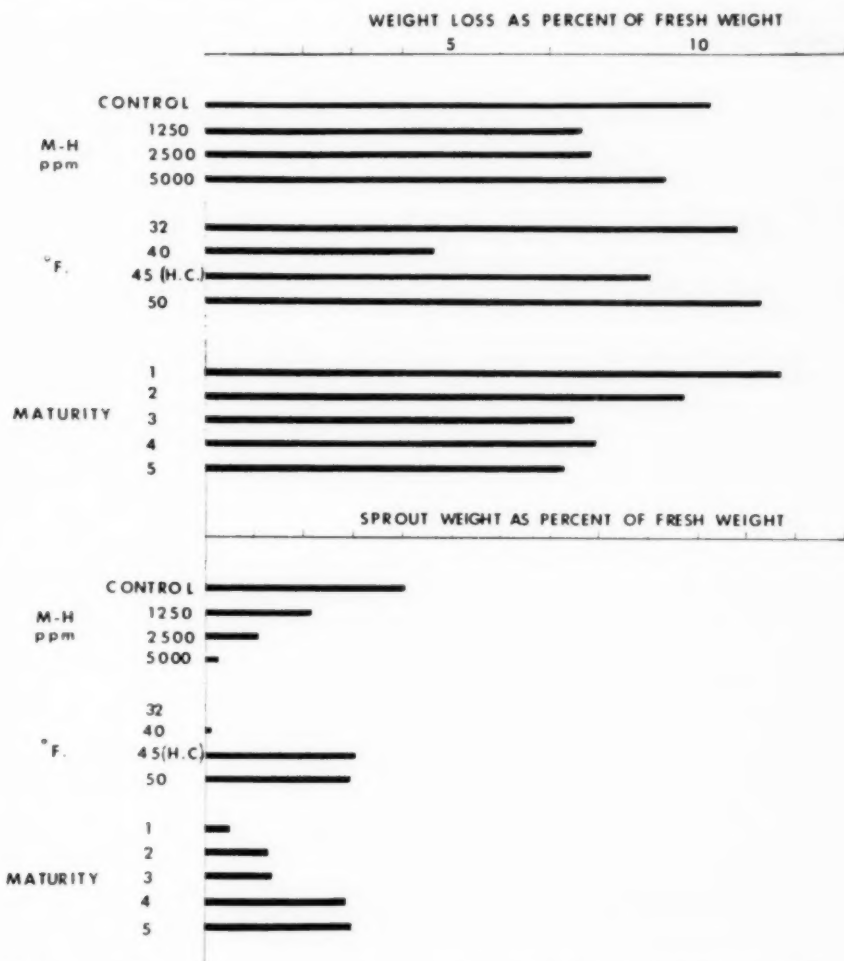


FIGURE 3.—The comparative effects of maleic hydrazide, maturity, and storage temperature on weight loss and sprout growth of Katahdin potatoes stored 6 months.

as you noted in table 2 show that the weight losses were influenced by vapor pressure deficits rather than by storage temperatures.

The maturity of the tubers greatly influenced the weight losses as shown in figure 3. The immature samples lost significantly more weight than did the mature samples. At the time of harvest, maturities 5, 4, and 3 (planted April 23, May 1 and 9, respectively) could be considered mature. The greatest difference in weight loss appeared between this group and maturities 2 and 1. These were planted May 23 and June 2, respectively.

Specific Gravity

The specific gravity of the stored potatoes was affected by the MH

TABLE 2.—*Percentage weight losses of Katahdin potatoes stored six months in four storage environments.*

Storage:	Temp. °F.	Per cent R.H.	Vapor Pressure Deficit, mm Hg.	Loss in Per cent Fresh Weight
Common	40	90	0.627	4.7
House Cellar	45	85	1.143	9.1
Refrigerated	32	75	1.145	10.9
Refrigerated	50	78	2.054	11.3

treatments, the storage environment, and the maturity of the tubers. The specific gravity of the tubers from plants that received no spray and those that received 5000 ppm. of MH was not different, but was significantly higher than the specific gravity of those receiving 1250 and 2500 ppm.

The specific gravity results were closely related to weight losses, which in turn were influenced by vapor pressure deficits. Storing at 40° F. resulted in a lower specific gravity than storing at other temperatures. The specific gravities of potatoes stored at 32°, 45°, and 50° F. were not significantly different. Tubers from potatoes planted April 23 and May 1 showed a significantly higher specific gravity than those planted later.

Cooked Color

Neither the concentration of MH nor the maturity of the tubers influenced the cooked color of the potatoes.

Potatoes stored at 50° F. cooked the whitest, whereas those stored at 32° F. cooked darkest. No differences were evident between the cooked color of potatoes stored at 40° and 45° F.

SUMMARY

Katahdin potatoes of different maturities were sprayed with three concentrations of MH and stored under four environments for six months. In the field there were no visible effects on foliage or tubers from any application of MH.

Analysis of variance before storage revealed no significant differences in yields, specific gravities, cooked color ratings, and flavor scores.

After storage for six months, sprout growth was inversely proportional to the concentration of MH, but proportional to the maturity of the tubers and the storage temperature.

The total weight loss of the stored tubers increased with increasing concentration of MH. The weight losses were greatly influenced by the vapor pressure deficits of the storage, and were inversely proportional to the maturity of the tubers.

Higher specific gravities resulted from zero and 5000 ppm. concentrations of MH, from immaturity, and from relatively large vapor pressure deficits in the storage atmosphere. Neither the cooked color nor the flavor of the potatoes was affected by MH. Potatoes stored at 32° F. cooked dark and had a sweet flavor.

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INTER-REGIONAL POTATO INTRODUCTION AND PRESERVATION PROJECT¹

R. W. HOUGAS AND F. A. KRANTZ²

The Inter-Regional Potato Introduction and Preservation Project (IR-1) was established as a cooperative enterprise between the 48 states of the four Land Grant College Regions and the United States Department of Agriculture on July 1, 1950. The project is supported by funds of the Research and Marketing Act of 1946. Land and housing have been provided, in part, by the Wisconsin Agricultural Experiment Station. Headquarters for the project are located at Madison in the Department of Genetics at the University of Wisconsin. Field work is conducted at the Peninsula Branch Station at Sturgeon Bay, Wisconsin (Figure 1.).

The project is directed by a committee of technical workers. This committee is composed of one technical worker actively engaged in potato improvement from each of the four Land Grant College Regions, the leader of the Federal Potato Breeding Project, the leader of the IR-1 Project and the head of the Division of Plant Exploration and Introduction or his designate. The administrative advisor of the technical committee is director of one of the North Central State Experiment Stations and is appointed by the directors of that region.

¹Accepted for publication August 20, 1953.

²Assistant Professor of Genetics, University of Wisconsin, Madison, Wis., and Professor of Horticulture, University of Minnesota, St. Paul, Minn. Leader of the IR-1 Project and Chairman of the IR-1 Technical Committee respectively.



FIGURE 1.—Location of the Inter-Regional Potato Introduction Project.

The major objective of this project is to promote and facilitate the improvement of the cultivated potato by providing a readily available reservoir of *Solanum* germ-plasm. Stocks carrying characters of economic importance (*i.e.*, resistance to disease and insects, superior horticultural characteristics including quality, yield, adaptability, *etc.*) are of primary interest.

The present collection contains approximately 1400 clonal lines and 360 seed lots. More than 45 of the known tuber-bearing *Solanum* species are represented in the collection. The worth of the collection has been materially increased through the generous contributions of several foreign laboratories, especially the Potato Genetics Station at Cambridge, the Scottish Potato Breeding Station at Edinburgh, and the Max Planck Institute for Plant Breeding in Germany.

Many stocks of the collection, especially the wild species, are maintained as true seed. Advanced breeding selections and varieties are propagated as clonal lines. Most of the clonal lines are being grown in the greenhouse to insure against loss through virus infection. Newly received clonal lines are grown in isolation and tuber-indexed for virus content.

Stocks of the collection are available to technical workers upon request. Listings of the currently available stocks, and pertinent evaluation data concerning these stocks, are periodically compiled. These listings are distributed to the various federal and state workers engaged in potato investigations, to the directors of the Agricultural Experiment Stations and to the administrators of the Bureau of Plant Industry, Soils, and Agricultural Engineering. Additional copies of these listings are available to technical workers upon request.

Requests for Foreign Introductions:

It should be emphasized that *all* exchanges of potato stocks with

foreign countries are handled and cleared through the Division of Plant Exploration and Introduction, Plant Industry Station, Beltsville, Maryland. Where foreign and United States technical workers are in direct correspondence, exchange of stocks will be considerably facilitated if the Division is advised of the request prior to actual shipment of materials. Where foreign and United States technical workers are not in direct contact, exchange of stocks will be expedited by submitting requests directly to the Division of Plant Exploration and Introduction, Beltsville, Maryland, which handles the necessary quarantine procedures.

Note: Potatoes shipped through channels other than those listed above are liable to destruction by inspection officials at the port of entry.

Identification of Stocks

It is the policy of the Potato Introduction Project to indicate clearly the identity and/or origin of stocks added to the collection. For example, all stocks received from the United States potato breeding program will be identified by USDA numbers, those from the Commonwealth Potato Collection by "CPC" numbers, and those from the Max Planck Institute, Germany, by "EBS" numbers. Unless otherwise advised, a prefix corresponding to the proper abbreviation of the State will be assigned to all stocks that may be received from State potato breeding programs. "P.I." (Plant Inventory) numbers are assigned to all introductions by the Division of Plant Exploration and Introduction.

Classification and Evaluation of Stocks

Except for the commercial potato, *S. tuberosum*, comparatively few research studies have been made on the wild and cultivated tuber-bearing species of *Solanum*. Research studies on these species would supply information aiding in their botanical and economic classification, and on their potential value for improving the commercial potato. The wealth of material in the collection, maintained at Sturgeon Bay, is available to technical workers and their graduate students in the fields of plant breeding, genetics, cytogenetics, phytopathology, entomology, plant physiology, taxonomy and plant chemistry. Technical workers interested in the tuber-bearing *Solanum* introductions and/or information concerning these introductions, may direct their correspondence to: The Potato Introduction Project, Department of Genetics, University of Wisconsin, Madison, Wisconsin.

POTATO NEWS AND REVIEWS**HONORARY LIFE MEMBERS**

Honored at Annual Meeting of the Potato Association of America. Left to right: John Bacon, President Muncie, S. G. Peppin, F. A. Krantz and E. L. Newdick.

The Potato Association of America honored four leaders in the potato industry at the banquet held in connection with our annual meeting at Madison.

The recipients of Honorary Life Membership in the Association are pictured above with retiring President J. H. Muncie. The following brief statements regarding the honored members' accomplishments were given at the banquet.

S. G. PEPPIN HONORED

Sydney George Peppin was born in Bristol, England, December 15th, 1885. He attended Public Schools and Queen Elizabeth's private school in that City, graduating from the latter with a certificate of the Cambridge Junior Examinations. He came to Canada in 1904 and entered the Public Service in the Dominion Department of Agriculture in 1914 as a Potato Inspector in the Division of Botany. In 1916 he was appointed Assistant to the late Dr. Paul A. Murphy, Pathologist-in-Charge of the Laboratory of Plant Pathology, Charlottetown, Prince Edward Island. Under his direction he organized the Canadian Seed Potato Certification Service in that province in 1917 as well as carrying on extensive investigatorial work on Potato Diseases, with special reference to virus diseases, of which little was known at that time. He continued to work under Dr. Paul Murphy until early in 1920, at which time Dr. Murphy returned to Ireland.

Early in 1920 he was instrumental in forming the Prince Edward Island Potato Growers' Association, as it had then become apparent there were immense possibilities for the production and sale of Certified Seed Potatoes. He was, however, more concerned with the production end, although at the same time he gave careful study to the requirements and desires of the purchasers of seed potatoes.

For several years he carried on the investigational work instituted by Dr. Murphy. As District Inspector in charge of Seed Potato Certification in Prince Edward Island he was instrumental in building up the acreage devoted to seed potatoes from a few acres in 1918 to a high of 32,079 acres in 1928, with the Irish Cobbler and Green Mountain varieties then mostly in demand.

In 1924 Mr. Peppin was honored by being elected Vice President of the Potato Association of America. His interest in the Potato Association has continued throughout his many years of service to the potato industry.

The next decade saw a somewhat reduced acreage, although the annual average amounted to some 17,500 acres. During the next decade from 1941 to 1950 the annual average acreage under inspection in Prince Edward Island amounted to approximately 25,600 acres, with an all time high reached in 1948 of 38,743 acres.

It was during this period from 1918 until his retirement from the Public Service in 1950 that he saw a build-up in the trade of Certified Seed Potatoes, from a part carload of less than 500 bushels to more than 3,700,000 bushels in 1950. This trade involved shipping to many states in the United States, as well as to most of the other Republics of North and South America, also to Europe and Africa, and to all the Provinces of Canada. He travelled extensively in the United States and made one trip to Cuba promoting the use of Canadian Certified Seed.

It is interesting to record here that he introduced the Sebago variety to Prince Edward Island by obtaining a 15-pound sample from Dr. Charles Clark, Presque Isle, Maine in 1939 and has seen that variety become so popular that by 1953 there were more than 16,000 acres entered for inspection, all of which emanated from that original peck sample.

Now after a period of 36 years in handling certification work, as well as catering to nearly 4000 growers annually, Peppin feels that he is entitled to take it easy and allow his successors to carry on.

DR. F. A. KRANTZ HONORED

Dr. F. A. Krantz was born at Westphalia, Iowa in 1890. He attended the school and college of Agriculture at the University of Minnesota, where he received the B. Sc. degree in 1918, M. Sc. in 1921, and Ph.D. in 1924. In 1919 he was made Instructor in Horticulture at Minnesota and thereafter advanced in rank to the position of Professor in 1937.

Dr. Krantz has been engaged in potato breeding and in the study of potato genetics since approximately 1918. He was aware from the early beginnings of his work that most of the standard potato varieties then grown were poor prospects as parents of improved varieties because of their heterozygosity and their relative pollen sterility and lack of bloom.

With characteristic patience, Dr. Krantz began a program to build up a superior breeding stock which could be used as parents of improved varieties. Through studies of the inheritance of pollen fertility and the application of the principles derived from these studies he has produced potential parent selections which are highly fertile, but which can be combined to produce varieties of low fertility and correspondingly high tuber yield.

By a program of alternate inbreeding and outbreeding these parents have also been brought to a relatively high degree of homozygosity for the important economic characters of the potato. This parent material is one of Dr. Krantz' chief contributions to potato breeding since many of the clones exceed the ordinary varieties in certain important commercial characteristics. Most of the eight or more varieties which Dr. Krantz has developed and released have been superior with respect to earliness, low tuber set, and uniformity and quality of tubers. They have found acceptance where such characteristics are especially important. The general usefulness of the parent selections is acknowledged by the extensive use other breeders have made of them in their own potato improvement work.

Dr. Krantz' experience and discoveries in potato breeding have been published in three bulletins which are classics for their content and straight-forward exposition. Numerous other papers record the results of his studies of inheritance in the potato of tuber color, scab resistance, and other characters in which fundamental contributions to the knowledge of potato genetics were made.

Students studying with Dr. Krantz have enjoyed the privilege of working beside him in the laboratory and in the field at Castle Danger, Minnesota. This opportunity (too often rare in student-teacher relationships) has enabled his students to learn well not only plant breeding, but many other phases of scientific agriculture.

Dr. Krantz has given generously of his time and wisdom in the organizational aspects of the potato industry, including the Potato Association of America, of which he was president in 1938.

He was active in the establishment of the National Potato Breeding Program, and has served on several committees interested in potato improvement.

Because of his contributions to potato culture as a research worker and teacher the Potato Association honored itself by electing Dr. Krantz to honorary life membership on September 7, 1953.

—Carl J. Eide

E. L. NEWDICK HONORED

E. L. Newdick was born in Georgetown, Maine, March 8, 1888. His studies at the University of Maine were interrupted by service in the Army during the First World War. He first served the Maine Department of Agriculture in 1908 and returned to its employment after the war and has served in the Division of Plant Industry continuously since 1919.

The State of Maine has indeed been fortunate during the past forty years to have as a part of its potato industry the services of E. L. Newdick. Probably no one individual has done more to develop Maine's seed industry and promote the use of better seed potatoes than has "Dick" by which name he is commonly known. He took the ball, so to speak, around 1914 at which time seed improvement work in Maine was almost unheard of. Probably the most important key to "Dick's" success in this venture has been his inborn desire to see the right things done and his uncanny ability to handle individuals in such a way as to accomplish this end. Throughout his years of work with seed potatoes he has used as a guide the council of the best research workers in the field. He has taken these results and interpreted them into their practical forms and then sold them to the potato growers of Maine.

He has always demonstrated his ability to be a leader not only in his field of specialized work but also in his every day life. These qualities led to "Dick's" appointment as Chief of the Division of Plant Industry in 1922. The University of Maine recognized Mr. Newdick by awarding him an honorary Master of Science degree in 1939. His fellow employees in the State House have looked to him for leadership many times in both social and business capacities. His leadership was again recognized in 1948 when he was elected president of the Potato Association of America. In 1947-1948 he was also chosen to tour Europe as a collaborator in agricultural relations for the U. S. State Department.

He started certification in Maine in 1914 and has helped build it up to a point where Maine now ships approximately 8,000 carloads of certified seed annually to approximately 20 states. As this industry grew and the problems grew with it many functions became needed to service it. Some of these are the Florida Test, Foundation Roguing Service, and the Maine Seed Potato Board. Pages could be written explaining these functions but suffice it to say that they all are a necessary part of this growing industry.

Probably the one function he has worked at the hardest and which is his favorite is the Seed Board's Super Foundation Farm at Masardis. This is a state-operated seed improvement farm, established in 1947 as a source of the highest quality foundation seed for the foundation seed growers of Maine. The success of this venture can best be judged by the demand for the seed being produced on this farm which is sold in small lots to seed growers in the state for planting seed plots. Demand for this seed has increased steadily since the farm was started until at the present time, it is difficult to furnish growers with the quantity of seed of the various varieties requested. He has acted as secretary of the Seed Board and as such has actually been general manager of this project. It certainly is a very important link in the chain of better seed production.

These are some of the achievements that make E. L. Newdick a worthy recipient of honorary life membership in the Potato Association of America.

—Paul Eastman

JOHN S. BACON HONORED

John S. Bacon was born February 9, 1891 at Westfield, N. J. He has been associated with the Potato Industry in one or more capacities for the greater part of his life. He has been head of the wholesale establishment, Bacon Brothers, Chicago, Illinois, since its origin in 1921. This firm grows, distributes and markets potatoes, both seed and table stock, from nearly all sections of the United States. It handles approximately 5000 carloads of potatoes annually and its customers and principals range from the smallest type of distributor to the largest of growers. Each customer, directly or indirectly, receives Mr. Bacon's individual attention.

John Bacon has earned the respect and confidence of the entire trade for his efficient marketing methods, his ability to judge values and his desire to create and coordinate a feeling of close relationship between the widely different phases of the Potato Industry. His somewhat modest and retiring nature belies his boundless energy and seemingly limitless capacity for work.

Bacon's interest in the problems ever present at the shipping point can perhaps best be exemplified by his many years of association with Starks Farms, Rhinelander, Wisconsin, both with the late Lelah Starks and before that with her father Leonard. He is, at the present time, a director of Starks Farms, Inc. The history of Starks Farms is legendary in the Potato Industry for its pioneering in the development of many hardy and good-yielding strains of seed potatoes. John Bacon is regularly consulted by the principals of that firm whose main objective is to carry on the good work of its founders. He, in conjunction with his brother Henry, has also been active in the development of Western North Dakota seed stock to the point where it is now preferred by growers in certain sections of the country.

John Bacon is a past president of the Chicago Carlot Potato Association and is a former member of the Potato Advisory Committee of the United Fresh Fruit and Vegetable Association. He has been a member of the Potato Association of America for a number of years and recently became a sustaining member of that organization.

Countrywide the name of John Bacon is closely linked with the Potato Industry and a record of his contributions to all its phases cannot be condensed into a few short paragraphs. His ability and integrity have inspired confidence in the minds of potato growers, dealers and processors. The end result has been the development of one of the most outstanding potato distributing organizations in the United States. John Bacon deserves to be ranked with the leaders of the industry as having done an outstanding job in promoting the orderly distribution of potatoes on a national scale.

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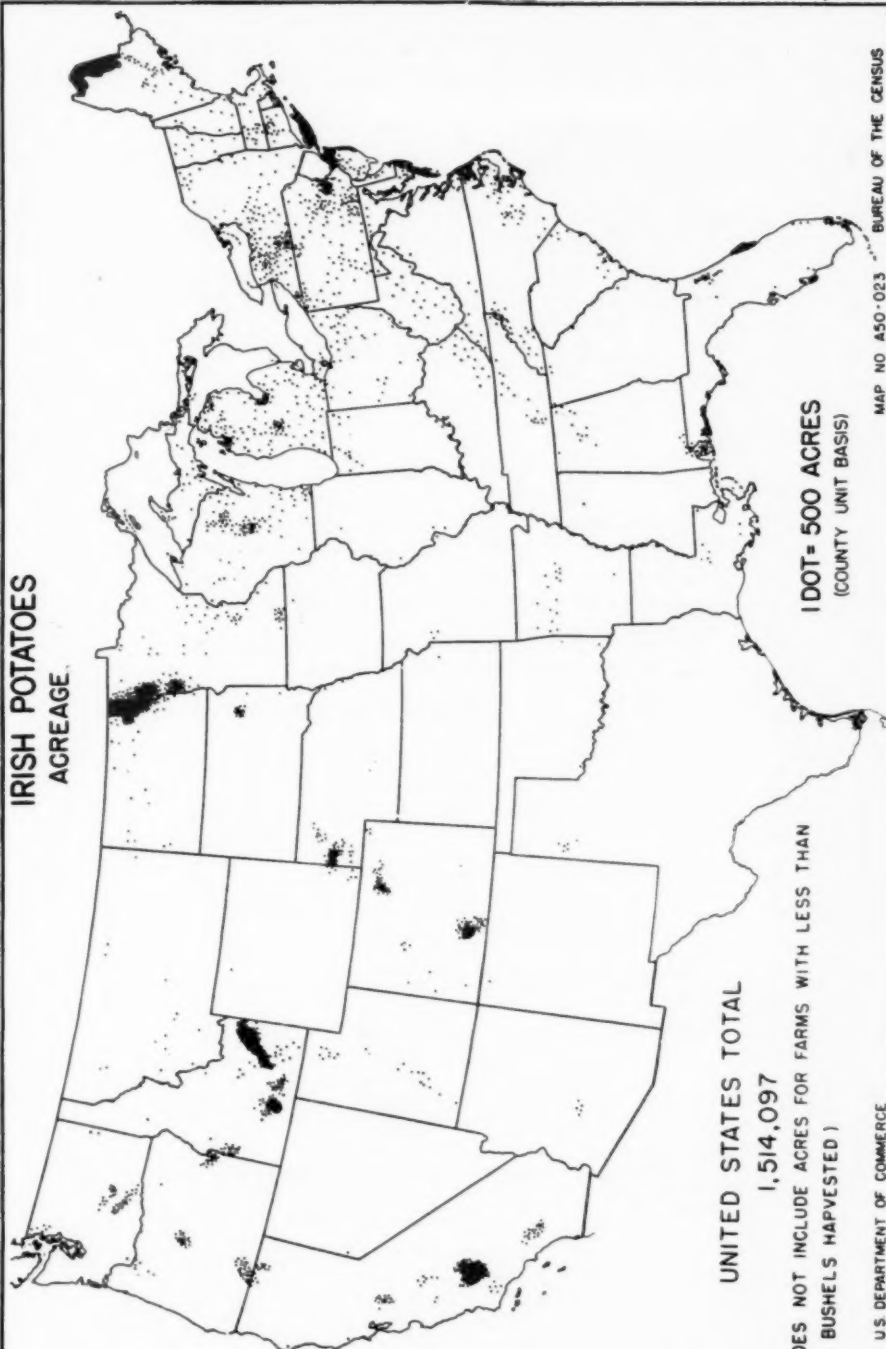
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(Continued on Page 20)

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**PRESENT DAY IMPORTANCE OF COMMERCIAL POTATO VARIETIES IN THE
UNITED STATES AS ESTIMATED BY REPRESENTATIVES
OF THE 48 STATES AND ALASKA**

STATE	VARIETIES
Alabama ¹	Bliss Triumph 70%; Sebago 30%
Arizona ¹	White Rose, Bliss Triumph, Red Warba
Arkansas ²	Bliss Triumph 90%; Irish Cobbler 10%
California	White Rose 72%; Russet Burbank 22%; Pontiac 5%; Kennebec 1%
Colorado	Red McClure, Bliss Triumph, Russet Burbank, Irish Cobbler, Rural, Pontiac
Connecticut	Katahdin 70%; Green Mountain 20%; Irish Cobbler, Chippewa, Rural, 10%
Delaware ²	Irish Cobbler 60%; Katahdin 20%; Dakota Red 5%; Sequoia 3%; others 12%
Florida ¹	Sebago, Bliss Triumph, Katahdin
Georgia ²	Irish Cobbler 60%; Bliss Triumph 30%; others 10%
Idaho ¹	Russet Burbank 95%; Bliss Triumph and White Rose 5%
Illinois ¹	Irish Cobbler, Katahdin, Sebago, Red Warba, Chippewa
Indiana ²	Katahdin 40%; Chippewa 25%; Irish Cobbler 25%; Bliss Triumph, Sebago, Early Ohio, Warba, Sequoia 10%
Iowa ²	Irish Cobbler 85%; all others 15%
Kansas	Irish Cobbler, Warba, White Cloud
Kentucky ²	Early: Irish Cobbler 95%; Bliss Triumph 5%. Late: Sequoia 60%; Sebago 5%; Katahdin 5%; Irish Cobbler (seed) 30%
Louisiana ³	LaSoda, Bliss, Triumph, DeSoda
Maine	Katahdin 52%; Green Mountains 20%; Kennebec 10%; Chippewa 9%; others 9%
Maryland ²	Irish Cobbler 50%; Katahdin 25%; Sebago 10%; Pontiac 10%; others 5%
Massachusetts ²	Katahdin 50%; Green Mountain 20%; Irish Cobbler 15%; Chippewa 6%; Russet Rural 4%; Sebago 3%; others 2%
Michigan ³	Russet Rural 45%; Sebago 20%; Katahdin 15%; Chippewa 5%; Irish Cobbler 5%; other varieties 10%
Minnesota	Irish Cobbler 47%; Bliss Triumph 17%; Red Pontiac 12%; Russet Burbank 5%; Kennebec 5%; Cherokee 4%; Red Warba 3%; Early Ohio 3%; Pontiac 2%; Waseca 1%; other 1%
Mississippi ³	Bliss, Triumph, 95%; Katahdin 5%
Missouri ²	Irish Cobbler 75%; Bliss Triumph 15%; Warba 5%; others 5%
Montana ³	Netted Gem (Russet) 70%; Bliss Triumph 20%; White Rose 7%; other varieties 3%
Nebraska ²	Bliss Triumph 75%; Progress 15%; Red Warba 8%; Pontiac, Katahdin, Russet Rural 2%
Nevada ²	Nevada Russet
New Hampshire ³	Katahdin 33%; Green Mountains 16%; Kennebec 14%; others 37%
New Jersey	Katahdin 60%; Irish Cobbler 20%; Chippewa 10%; Kennebec 5%; Green Mountain 2%; others 3%
New Mexico ²	Pontiac 70%; White Rose 15%; Irish Cobbler 10%; Katahdin 5%
New York ²	Katahdin 35%; Green Mountain 20%; Sebago 10%; Irish Cobbler 10%; Chippewa 5%; Russet Rural 5%; Pontiac 5%; Ontario 5%; Rural and Houma 5%
North Carolina ³	Irish Cobbler 60%; Bliss Triumph 20%; Sequoia and Katahdin 20%
North Dakota ²	Bliss Triumph 35%; Red Pontiac and Pontiac 30%; Irish Cobbler 25%; others 10%
Ohio	Katahdin 55%; Irish Cobbler 35%; Sebago, Russet Rural, Cherokee 10%
Oklahoma ¹	Bliss Triumph, Red Warba, Irish Cobbler

STATE	VARIETIES
Oregon	Netted Gem (Russet Burbank) 70-75%; White Rose 13%; Bliss Triumph 7%; others 5%
Pennsylvania	Katahdin, Russet Rural, Kennebec, Irish Cobbler, Sebago, Chippewa
Rhode Island	Katahdin 71%; Irish Cobbler 11%; Green Mountain 8%; others 10%
South Carolina ²	Sebago 70%; Katahdin 10%; Irish Cobbler 10%; Bliss Triumph 5%; Pontiac, Chippewa, Kennebec 5%
South Dakota ³	Bliss Triumph 50%; Pontiac 50%; Irish Cobbler 15%; Chief 5%; LaSoda 5%; Warba 5%
Tennessee ¹	Irish Cobbler 80%; Sequoia 15%; Bliss Triumph 5%; Katahdin trace
Texas ¹	Bliss Triumph 60%; White Rose 20%; Irish Cobbler 13%; Pontiac 4%; Katahdin 2%; Red Warba 1%
Utah ¹	White Rose and Bliss Triumph 90%; Netted Gem 5%; Irish Cobbler, Katahdin, Pontiac 5%
Vermont	Katahdin, Green Mountain, Houma
Virginia	Irish Cobbler 90%; Sebago 5%; other 5%. Norfolk & Eastern Shore area
Washington	Russet Burbank 80%; White Rose and others 20%
West Virginia ³	Early: Irish Cobbler 80%; Chippewa 10%; others 10%. Late: Katahdin 50%; Sebago 30%; Kennebec, Menominee, others 20%
Wisconsin ²	Chippewa 25%; Irish Cobbler 25%; Katahdin 20%; Russet Rural 8%; Bliss Triumph 5%; Sebago 5%; Russet Burbank, Russet Sebago, Pontiac, White Rural, Red Warba 10%; others 2%
Wyoming	Bliss Triumph 75%; Red Pontiac 10%; Progress 5%; Irish Cobbler 3%; Russet Burbank 3%; others 4%
Alaska ³	Arctic Seedling

¹ From 1950 Yearbook

² From 1951 Yearbook

³ From 1952 Yearbook

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DEVELOPMENT OF SEED POTATO CERTIFICATION IN THE UNITED STATES

E. L. Newdick¹

Thirty-nine years ago this summer certification of seed potatoes began as a project in two states. It was my privilege to work in Maine the first season when with considerable emphasis, we looked for *rhizoctonia sclerotia*, black-leg, early blight, mosaic, and varietal mixture. Our knowledge was limited and the job as a whole went through several years of growing pains during which errors of omission and commission were made. I have tried to keep in close touch with developments and must conclude that nationally, certification officials and programs have made real progress—and established a fine reputation. Without certification the potato industry would have become economically unsound.

The general procedure has been for the pathologist, entomologist and the certification agencies to work very closely together. Much time was spent in establishing the original rules which have stood well the test of time. One might reasonably conclude that it is always bad to be continually revising a new program.

It was my privilege, in 1948, to visit with Dr. Appel in Berlin. He visited this country in 1913 and his suggestion to Dr. Orton of the U.S.D.A. was probably the forerunner of the present certification program. Incidentally, I have among my treasures the autographs of four great potato scientists: Dr's. Appel, Wollenweber, Snell and Schlumberger. The day I spent with them will always be an honor as far as I am concerned.

Some Changes in Varieties

I presume that the history of certified seed potatoes is about the same in most states. There have been some changes in varieties in most areas. In Maine we dealt many years with the Green Mountain until leafroll and net necrosis gave this variety a tremendous set-back. The Spaulding Rose, once grown to sell in Florida, is now a thing of the past. The Katahdin has replaced many varieties. Katahdin, Irish Cobbler, Kennebec, Green Mountain, Chippewa, and Sebago are the most important varieties in the order named. For many years the Irish Cobbler has been the most profitable potato for the certified seed grower.

Potato diseases, the basis of our work, have their ups and downs. In 1923 we were having verticillium wilt trouble in our Spaulding Rose. This variety is no longer grown in our State and although verticillium has always been present it was not until the new Kennebec came into the picture that verticillium again became most important, especially in the Northeast. This variety appears to be very susceptible.

We in Maine will always remember the leafroll epidemic of the late 30's which gave us so much net necrosis in Mountains and also caused plenty of trouble with other varieties. At this time the leaders in Maine were forced to establish the so-called Florida Test so that we could determine what to plant in Maine for seed after using Florida as a testing ground. To many states the Florida Test has become a must and, as one of the outstanding jobs, continues to be a part of the certified seed program.

Advent of DDT For Aphid Control

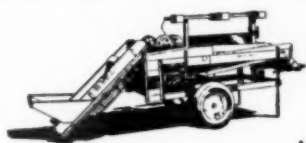
In the early 40's the advent of DDT, which we have used successfully for aphid control, proved to be the biggest help that had come to the potato industry. Immediately, growing good foundation seed was not as difficult and those who were quick to take advantage of a situation soon obtained better seed—and were on their way to higher yields than ever before in the potato industry. About the next year or two a set-back came in the form of ring-rot but our growers were quick to grasp the situation and throughout the country a zero tolerance was established by all certifi-

cation agencies. In my humble opinion, this was the one thing that did more than anything else to keep ring-rot reduced to a point where the industry has not suffered too much from it.

The next and last step which I think was the crowning event of all, was the establishment in many states of so-called super-foundation seed farms. On these farms all the information that has ever been given to us by the Experiment Stations is being carried on. We, here in Maine, have a State Seed Board of which I happen to be Executive Secretary, and we have had a fine time with our farm at Masardis. We have been most fortunate in having a program director in the person of Mr. W. F. Porter who has done an excellent job for us. One year we were able to distribute 45,000 bushels of seed in which the disease count was so low that it did not even show in the Florida Test. We do not know that we can do this every year, but we believe that the industry will never again try to get along without this type of farm that furnishes seed to the foundation growers. These men in turn sell their seed to the certified growers who ship a high percentage of their products to other states and also furnish the local table stock growers. In Maine 92 per cent of this last group used certified seed in 1951.

To summarize, get your small allotment of potatoes from the USDA breeding program, put these through the greenhouse for tuber index, multiply on your foundation seed farm, send samples to Florida, and retest again in the greenhouse from your seed selections. It is a steady job every year but it pays off. It is probably easier to get good seed now than ever before and our hope is that the table stock people can find some way to develop their program and do as good a job as the certified growers of this country have done.

¹Chief, Division of Plant Industry, Maine Department of Agriculture, Augusta, Maine.



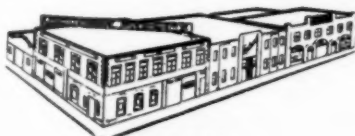
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Rules and Regulations Affecting SHIPMENT OF SEED POTATOES

into various states

Alabama—Certified seed Irish potato tags will only be recognized when issued by properly constituted and recognized officials or agencies of the States or territories of origin and upon determination that minimum requirements of the State of Alabama for certified seed potatoes have been complied with and properly tagged. Lead seals to close containers. (1941)

Connecticut—No restrictions. (1947)

Delaware—No restrictions. (1947)

Florida—It shall be a violation of the Seed Act to use the terms "certified," "registered," "inspected," or any other form of such terms unless the seed potatoes have been inspected and certified by an inspection agency of any State or Country duly recognized and approved by the Commissioner of the State of Florida. (1947)

Georgia—No restrictions. (1946)

Idaho—Must have proper certification tags attached.

Illinois—No restrictions. (1947)

Indiana—Seed potatoes bearing evidence of certification by a Department of Agriculture meet all requirements for entry into Indiana. (1935)

Kentucky—All containers must bear form "B" tags secured from the Director of the Experiment Station. The poundage in the bag should be completely covered by the poundage on the tag. Price of tags vary from 1 cent to 4 cents each according to weight of container. These tags are commonly secured and put on by distributors in Kentucky and not by out-of-state shippers. (1946)

Louisiana—Must register with Department of Agriculture. Bags must be sealed with lead seals. Must attach certificate inside car door. (1944)

Maryland—No law concerning the branding or tagging of potatoes but if it is Maine seed planted to certify in Maryland it must be Florida Tested. (1947)

Massachusetts—No restrictions. (1947)

Michigan—Require only a complete set of inspection reports. (1947)

Minnesota—No restrictions. (1947)

Mississippi—Sale allowed only when certified by duly authorized inspection officials of the state of origin. This means blue tag.

Missouri—No restrictions. (1947)

New Hampshire—No restrictions. (1947)

New Jersey—Regular blue tag.

New York—Regular blue tag.

North Carolina—Potatoes must be certified and of U. S. No. 1 quality.

Ohio—Must bear official certified tag of State doing the certification work, which must bear growers name and address and state where grown. (1947)

Oregon—No restrictions. (1947)

Pennsylvania—Regular blue tag. (1946)

South Carolina—Must bear certified tags issued by proper officials or agencies of state of origin. (1945)

Tennessee—Regular blue tag. (1947)

Oklahoma—Regular blue tag. (1948)

Texas—No specific law but object to sale of certified seed unless it bears genuine tag of official certification. (1947)

Vermont—No restrictions. (1947)

Virginia—Seed Potato Regulation Number 1, as amended October 22, 1952, providing for the inspection of seed potatoes and fixing tolerances for quality and condition authority. Effective date, October 22, 1952.

West Virginia—Each grower or shipper must register with Department of Agriculture at Charleston, W. Virginia. Fee, 1 cent each container. Must have official certification tag. (1947)

Wisconsin—Regular blue tag. (1947)

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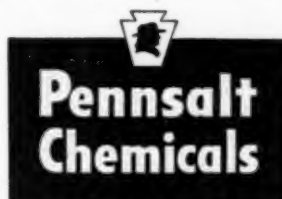
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DOMINION OF CANADA CERTIFIED SEED PRODUCTION
DEPARTMENT OF AGRICULTURE
SCIENCE SERVICE — DIVISION OF PLANT PROTECTION
Total Production by Variety and Province, 1952 Crop, In Bushels

Variety	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
Katahdin	445,200	48,800	2,216,000	3,500	247,200	3,100			3,200	2,967,000
Sebago	2,403,000	26,600	52,000		8,700	100			1,600	2,492,000
Green Mountain	478,400	22,500	300,000	450,000	9,500	2,000			29,600	1,292,000
Irish Cobbler	924,300	19,700	138,200	33,000	19,000	7,000		700		1,142,000
Canso	339,700	12,000	171,000	10,000	63,000	5,800	100		2,500	604,000
Netted Gem	14,300	13,200	40,700		600	4,000	400	103,800	389,000	566,000
Pontiac	137,000	12,000	215,000			15,600	400	400	7,600	388,000
Bliss Triumph	3,100	20,000	276,000	200	100	3,100	300	200		303,000
Keswick	40,200	2,700	59,000	11,000	13,400	2,700			3,000	132,000
White Rose			28,500						55,500	84,000
Rural Russet		6,500	69,500		4,000					80,000
Chippewa	3,100	14,600	4,400	200	48,600				100	71,000
Warba	33,600	3,000	2,000		2,800	6,500	1,500	4,800	17,800	72,000
Kennebec	3,100	11,600	15,300	13,000		2,600			400	46,000
Ontario		100	10,400		3,500		1,900			14,000
Columbia Russet			300			4,600			4,300	11,100
Teton				10,000		7,400	1,600	100		10,000
Early Ohio										9,100
Early Epicure	2,100									8,300
Early Rose		600							6,200	5,600
Canus			1,700		100	800	800	900	300	4,600
Red Warba				100	100	4,000			200	4,400
Dooley (R.N.Y.)					3,800					3,800
Sequola	2,600		1,200							2,600
Mohawk		1,500								2,700
Garnet Chili		2,200								2,200
Burbank		400								1,400
McIntyre	1,300	100							1,000	1,400
Pawnee		1,000								1,000
Great Scot										800
Gold Coin									800	800
Manota									600	600
Sir Walter						500				500
Raleigh									200	200
Carter's Early								200		200
Favorite									200	200
Wee MacGregor										200
White Bliss			200							200
Arran Victory		100								100
TOTALS	4,831,000	219,200	3,601,400	531,000	424,400	69,800	7,000	111,100	529,100	10,324,000

CANADA DEPARTMENT OF AGRICULTURE

Science Service — Division of Plant Protection

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TOTAL CANADIAN POTATO PRODUCTION — 1952

	Acreage (000)		Yield per Acre Bushels		Production Bushels (000)	
	1951	1952	1951	1952	1951	1952
Prince Edward Island	29.6	33.4	200	290	5,930	9,686
Nova Scotia	11.3	12.0	180	230	2,034	2,760
New Brunswick	38.1	42.7	250	257	9,510	10,974
Quebec	92.0	91.7	138.5	149	12,739	13,663
Ontario	54.9	56.1	176	201	9,661	11,276
Manitoba	15.8	17.3	142	159	2,244	2,751
Saskatchewan	15.7	14.1	122.5	131	1,923	1,847
Alberta	17.7	16.7	133	195	2,354	3,256
British Columbia	9.8	10.2	200	260	1,960	2,652
CANADA	284.9	294.2	169.7	200.1	48,355	58,867

Dominion Bureau of Statistics, November, 1952

ASSOCIATIONS IN CANADA ACTIVELY ENGAGED IN
THE IMPROVEMENT OF THE POTATO INDUSTRY

The Northern Alberta Certified Seed Potato Grower's Association Ltd., Lacombe, Alberta. President, J. Prina, Lacombe; Secretary-Treasurer, M. C. Bradley, Lacombe; Selling Agency, W. Robinson, 201 Birks Bldg., Edmonton, Alta.

Peers Associated Certified Seed Potato Growers of Northern Alberta, McLeod Valley P.O., Alberta. Secretary-Treasurer, C. H. S. Bowness, McLeod Valley.

Southern Alberta Potato Improvement Committee. Chairman, J. W. Marritt, 207 Northern Bldg., Edmonton, Alberta; Secretary, W. Lobay, Field Crops Branch, Provincial Dept. of Agriculture, Edmonton.

B. C. Certified Seed Potato Growers' Association. Secretary-Manager, S. J. Gray, R. R. 6, Langley Prairie, B. C.

B. C. Coast Vegetable Marketing Board. Secretary-Manager, R. N. Mangles, 405 Railway St., Vancouver, B. C.

B. C. Interior Vegetable Marketing Board. Secretary-Manager, E. Poole, 1470 Water Street, Kelowna, B. C.

Cariboo Certified Seed Potato Association. Box 67, Quesnel, B. C. President, W. A. Johnston, Quesnel; Secretary, J. Rome, Quesnel.

Colebrook Potato Growers' Association. Secretary-Manager, John Lane, Surrey Centre, B. C.

Columbia Potato Growers Association. President, R. M. Grauer, 236 Airport Road, Sea Island, Vancouver; Vice-president, Duncan May, 1473 Cambie Road, R. R. No. 2, Vancouver; Secretary, C. H. Bradbury, 3676 West 38th Avenue, Vancouver.

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Northern Seed Potato Company Limited, 691 Province Bldg., Vancouver 3, B. C. President, C. H. Bradbury, 3676 West 38th Avenue, Vancouver; Vice-President, Mrs. C. H. Bradbury, 3676 West 38th Avenue, Vancouver; Secretary, Miss A. McAleer, 2955 Fraser Street, Vancouver.

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Pemberton Seed Potato Control Area Association. Secretary-Manager, John Decker, Pemberton, B. C.

Salmon River Valley Seed Potato Control Area Association. Secretary-Manager, R. C. Freeze, Armstrong, B. C.

Manitoba Seed Potato Growers Co-op Association, c/o Winnipeg Gardeners Coop., Ross and Ellen, Winnipeg, Manitoba. President, W. S. Nebozenko, Box 1120, Portage LaPrairie; Secretary-Treasurer, H. Gerez, Manager, Wynn Thomas, c/o Manitoba Vegetable Co-op., 20 Derby St., Winnipeg.

New Brunswick Potato Marketing Board, Hartland, N. B.

Potato Growers Association of New Brunswick, Grand Falls, N. B. President, H. L. Mulherin; Secretary, H. W. Mulherin.

Kings County Potato Growers' Association, Canning R. R. 2, Kings County, Nova Scotia. President, D. D. Sutton, Port Williams, N. S.; Vice-President, George Eaton, Centreville, R.R. 2, N. S.; Secretary-Treasurer, H. L. Parker, R. R. 2, Canning.

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Agricultural Institute of Canada, 338 Somerset St., West Ottawa 4. Publishers of Agricultural Institute Review. President, J. B. Harrington, Univ. of Sask., Saskatoon, Sask.; Vice-President, G. R. Smith, Nova Scotia Dept. of Agri. and Marketing, Truro, N. S.; Hon. Secretary, J. C. Woodward, Division of Chemistry, Science Service, Ottawa; General Secretary, L. W. S. Hura, 338 Somerset St. W., Ottawa 4.

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Crop Improvement Association, Muskoka-Parry Sound District. Secretary, Agricultural Representative, Huntsville, Ont.

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Crop Improvement Association, Cochrane District. Secretary, Agricultural Representative, Cochrane, Ont.

Hanmer Co-operative, Hanmer, Ont.

North Simcoe Potato Growers' Co-operative, R. R. 4, Coldwater, Ont.

Ontario Soil and Crop Improvement Association (Potato Section), Ontario Department of Agriculture, Parliament Bldg., Toronto, Ont.

Publishers of Potato Peelings. Secretary, Potato Section, R. E. Goodin, Parliament Bldg., Toronto.

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Prince Edward Island Potato Promotional Committee, Charlottetown, P.E.I. Secretary, S. C. Wright, Provincial Department of Agriculture, Charlottetown.

Provincial Potato Protection Committee, Department of Agriculture, Parliament Bldgs., Quebec, Publishers of Potato Protection Guide. President, George Gauthier; Secretary, Andre Doyle.

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WORLD POTATO production is down 12% in the 1951-'52 globular estimate. The Netherlands leads the world in per-acre production with a rating of 363 bushels. USA's yield is 241 bushels; Russia's, 111.

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Agricultural Institute Review, 338 Somerset St., West, Ottawa, Ont., Canada. Published bi-monthly by the Agricultural Institute of Canada. Editor, Hilda Gray. Subscription price \$2.00 per year.

American Potato Journal, New Brunswick, N. J. Published monthly by the Potato Association of America. Editor, Dr. William H. Martin. Subscription price \$4.00 per year.

The Agronomy Journal, 2702 Monroe St., Madison 5, Wis. Published monthly by the American Society of Agronomy. Editor, L. G. Monthey. Subscription price \$15.00 per year.

The American Vegetable Grower, Willoughby, Ohio. Published monthly. Editor, R. T. Meister. Subscription price, \$1.00 per year, 3 years \$2.00, Canada and Foreign \$1.50 per year.

The Badger Common Tator, Fidelity Bank Bldg., Antigo, Wis. Published monthly by the Potato Growers of Wisconsin, Inc. Editor, Harold R. Simons. Price \$1.00 per year—free to members.

Colorado Potato Grower, 601 Cooper Bldg., Denver 2, Colo. Published monthly by the Colorado Potato Growers Exchange. Editor, L. E. Waters. Subscription price \$1.00 per year.

The Common-Tater, Vancouver, B. C., Canada. Published quarterly by the British Columbia Coast Vegetable Marketing Board. Subscription price—free on request.

Country Life, Box 700, Vernon, British Columbia, Canada. Published monthly. Official organ of Federation Movements. Editor, C. A. Hayden. Subscription price \$1.00 per year Canada, \$2.00 U. S.

Fruit & Vegetable Review, Orange Savings Bank Bldg., Orange, Calif. Published monthly. Editor, Briant Sando. Subscription price \$3.00 per year.

The Guide Post, 1100 North 7th St., Allentown, Penna. Published monthly by the Pennsylvania Cooperative Potato Growers, Inc. Editor, Russell L. Ruble. Subscription price \$1.00 per year.

Hints to Potato Growers, New Jersey Agri. Experiment Station, New Brunswick, N. J. Published monthly by the New Jersey State Potato Association. Editor, John C. Campbell. Subscription price \$3.00 per year.

Kern County Potato News, P.O. Box 83, Bakersfield, Calif., official organ of Kern County Potato Growers Association. Published semi-monthly. Editor, Don F. Maupin. Subscription price—to members and growers only.

M. P. G. News, Presque Island, Maine. Published monthly by the Maine Potato Growers, Inc. Editor, Eugene K. Rowe. Subscription price—free on request.

The Mail Bag, Box 277, Scotts Bluff, Neb. Published monthly by Nebraska Potato Development Division, State of Nebraska. Editor Earl P. Barrios. Subscription price—free on request.

Market Growers Journal, 11 South Forge St., Akron 4, Ohio. Published monthly. Editor, Edward S. Babcox, Jr. Subscription price \$3.00 one year, \$5.00, 2 years, \$7.00, 5 years.

The Packer, 201 Delaware St., Kansas City 6, Mo. Published weekly. Editor R. V. Whiting. Subscription price \$5.00 per year.

La Pomme de Terre Francaise, Published monthly by the Federation Nationale des Producteurs de Plantes de Pommes de terre. Editor, Henri Demesmay. Subscription price 250 francs per year.

The Potato Chipper, 1360 Hanna Bldg., Cleveland 15, Ohio. Published monthly by the National Potato Chip Institute. Managing Editor, Harvey F. Noss. Subscription price \$5.00 per year.

The Potato Journal, c/o R. G. Robinson Ltd., Box 4, Papanui, Christchurch N.W. 2, New Zealand. Published quarterly. Editor, R. G. Robinson. Subscription price—free.

Potato News, Published by Empire State Potato Club, Inc., Georgetown, N. Y. Editor, H. J. Evans. Subscription price—free.

Pre Pack Age, 1250 East Main St., Stamford, Conn. Published monthly, editor Robert A. Cooper. Subscription price \$3.00 per year.

The Produce News, 6 Harrison St., New York City. Published weekly. Editor, A. E. Haglund. Subscription price \$3.00 per year.

Seed Journal, College Station, Fargo, North Dakota. Published quarterly. Subscription price \$1.00.

Seeder, P.O. Box 2601, Boise, Idaho. Published quarterly by the Idaho Crop Improvement Ass'n. Editor, C. G. d'Easum. Subscription price—free.

Spud Notes, Colorado A. and M. College, Fort Collins, Colorado. Published monthly by the Extension Service, Colorado A. and M. College. Editor, Cecil W. Frutchey. Subscription price—free.

"Spuditems," Bank Bldg., Monte Vista, Colo. Published weekly by the San Luis Valley Potato Board of Control. Editor, Wilbur G. Erickson. Subscription price—free.

The Spudlight, 777 - 14th St., N.W., Washington 5, D. C. Published weekly by the Potato Division, United Fresh Fruit & Vegetable Association. Editor, Kris P. Bemis. Subscription price \$25.00 per year.

Tabb Potato Service, 9 South Kedzie Ave., Chicago, Ill. Published weekly. Editor, L. J. Crescio. Subscription price \$50.00 per year.

The Taterstater, Presque Isle, Maine. Published quarterly by the Aroostook Potato Growers, Inc. Editor, Donald C. Umphrey. Subscription price—free.

The Valley Potato Grower, Box 301, East Grand Forks, Minn. Published semi-monthly by the Red River Valley Potato Growers Association. Editor, W. M. Case. Subscription price—free.

Vee-Gee Messenger, Preston, Maryland. Published quarterly. Editor, Max Chambers. Subscription price 20c per year, \$1.00, six years.

Western Grower and Shipper, 606 South Hill St., Los Angeles 14, Calif. Published monthly by the Western Growers Association. Editor, Frank Howatt. Subscription price \$2.50 per year.

What's New in Crops & Soils, 2702 Monroe Street, Madison 5, Wis. Published nine times a year by The American Society of Agronomy. Editor, L. G. Monthey. Subscription price \$3.00 per year.

World Crops, Stratford House, Eden St., London, N.W.1, England. Published monthly. Editor Sir Harold Tempany. Subscription price, \$8.00 one year, \$20.00, 3 years.

POTATO HISTORY

Although called "Irish," good old *Solanum tuberosum* is native to the mountains of tropical America from Chili to Mexico. It was widely cultivated in South America at the time of the Spanish conquest.

Sir Walter Raleigh showed Merrie England how well potatoes would go with beef gravy in 1585 and about the same time he gave the potato its colonial debut in Virginia. The piratical Sir Francis Drake is supposed to have brought the spud to Ireland. Next to Indian corn, the potato is the most important contribution of the Americas to the food plants.

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MERCHANTABLE POTATO STOCKS AS OF JANUARY 1, 1953 WITH COMPARISONS*

Merchantable Potato Stocks Below Average But 19.5 Million Bushels Larger Than January 1, 1952 Holdings

Stocks of merchantable potatoes held in storage on January 1, 1953 by growers and local dealers in or near areas where produced are estimated at 113,370,000 bushels by the Bureau of Agricultural Economics. These holdings are 11 per cent smaller than the 10-year (1942-51) average January 1 merchantable stocks but exceed the 93,905,000 bushels in storage January 1, 1952 by 21 per cent, or 19.5 million bushels. Compared with holdings on January 1, 1952, stocks in the late States of the East are up 5.4 million bushels, .2 million bushels higher in the Central late States, up 14.0 million bushels in the late States of the West but down .1 million bushels in the intermediate potato States.

Following the potato shortage that developed last spring, potato prices rose sharply and continued high throughout the summer and early fall. In the intermediate States, production was reduced sharply and the crop moved to market very rapidly. Movement from the late States has also been very active. For the late States, an estimated 124,855,000 bushels of the 1952 crop were marketed before January 1, 1953. These marketings are about 8,000,000 bushels larger than the movement from the preceding year's crop before January 1, 1952.

POTATOES (IRISH): MERCHANTABLE STOCKS HELD BY GROWERS AND LOCAL DEALERS ON JANUARY 1 IN THE 36 LATE AND INTERMEDIATE STATES AND ARIZONA¹

GROUP AND STATE	10-year average Jan. 1, 1942-51 ²	January 1, 1952	January 1, 1953 ³
	Crops of 1941-50	Crop of 1951	Crop of 1952
LATE STATES			
		Thousand bushels	
Maine	38,081	29,480	33,760
New Hampshire	457	370	430
Vermont	451	230	230
Massachusetts	708	400	460
Rhode Island	368	330	260
Connecticut	1,688	1,310	1,220
New York - L. I.	2,529	1,750	3,000
New York - Upstate ..	6,432	5,440	5,630
Pennsylvania	7,277	5,870	5,600
West Virginia	194	80	45
9 EASTERN	58,184	45,260	50,635
Ohio	1,439	800	700
Indiana	913	620	570
Illinois	66	20	15
Michigan	6,107	3,960	3,760
Wisconsin	2,917	2,380	2,500
Minnesota	7,379	5,480	6,010
Iowa	249	75	100
North Dakota	8,800	5,740	5,900
South Dakota	745	600	350
9 CENTRAL	28,696	19,675	19,905
Nebraska	4,550	2,150	3,100
Montana	1,057	1,070	1,470
Idaho	17,496	14,040	19,010
Wyoming	1,073	550	670
Colorado	6,344	4,000	7,980
New Mexico	33	15	5
Utah	1,113	860	1,500
Nevada	277	200	300
Washington	1,928	1,090	1,250
Oregon	3,832	2,640	3,420
California (Late)	2,587	2,000	3,900
11 WESTERN	40,290	28,615	42,605
29 LATE STATES	127,170	93,550	113,145
INTERMEDIATE STATES:			
New Jersey	305	150	95 ⁴
Delaware	30	20	15
Maryland	133	60	30
Virginia	178	50	40
Kentucky	108	50	25
Missouri	60	15	15
Kansas	41	5	5
7 INTERMEDIATE STATES	854	350	225
36 LATE AND INTERMEDIATE STATES	128,024	93,900	113,370
Arizona ⁴	30	5	—
TOTAL 37 STATES	128,054	93,905	—

¹ Merchantable stocks consist of potatoes held by growers, local dealers and buyers on farms or near areas of production for sale or delivery after December 31. They include potatoes held for sale or delivery to starch factories and other processors.

² Note that the 10-year average figures ("Group" and "All States") are the averages of the yearly totals, not the sum of group or State averages.

³ Preliminary.

⁴ Arizona has been transferred from the intermediate to the early group of potato States and merchantable stocks estimates for this State discontinued with the crop of 1952.

* Reprinted from United States Department of Agriculture, Bureau of Agricultural Economics, Washington, D. C.



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CERTIFIED SEED POTATO REPORT

1952 PRODUCTION OF CERTIFIED SEED POTATOES LARGER THAN IN 1951 AND 10 YEAR AVERAGE

The 1952 production of certified seed potatoes was 42,755,620 bushels, according to information received by the Bureau of Agricultural Economics from certifying agencies in 30 States. This is 17 per cent larger than the 1951 production of 36,630,815 bushels and 16 per cent above the 1941-50 average of 36,722,400 bushels but is 16 per cent smaller than the record 1950 production of 51,071,441 bushels.

The increase in the 1952 production over 1951 was due entirely to the larger acreage in 1952. The yield of 321 bushels per acre in 1952, although above the average of 262 bushels, was smaller than the 1951 yield of 333 bushels. Total acreage of certified potatoes harvested in 1952, at 133,140 acres, was 21 per cent larger than the 109,995 acres in 1951, but 5 per cent below the 10-year average of 140,245 acres.

For the sixth consecutive year Katahdin, with a production of 12,901,183 bushels, led all other varieties. It was followed in this order by Russet Burbank with 4,989,950 bushels; Cobbler 4,821,386; Red Pontiac 3,670,554; Triumph 3,552,861; White Rose 2,963,343; Kennebec 2,581,587; Green Mountain 1,292,645; Ontario 1,154,628; and Chippewa 1,133,626 bushels. The production of these 10 varieties accounted for 39,061,763 bushels, 91 per cent of the total production of certified seed potatoes in 1952.

Production of other varieties in bushels was as follows: Sebago 633,924; Pontiac 507,823; Russet Rural 432,610; Red Warba 306,625; Cherokee 256,272; Russet Sebago 236,900; Red McClure 225,160; Teton 205,367; Progress 204,049; Early Ohio 155,613; La Soda 83,529; Sequoia 64,535; Rural New Yorker 63,184; Burbank 61,850; Houma 39,775; Essex 39,218; Waseca 37,166; De Soto 12,725; White Cloud 9,830; Yampa 7,485; Mohawk 7,174; Placid 5,460; Early Rose 4,200; Kasota 3,850; Satapa 3,300; Beauty of Hebron 1,200; and all other classified and unclassified varieties 85,033 bushels.

TABLE 1
CERTIFIED SEED POTATO ACREAGE AND PRODUCTION BY STATES
AVERAGE 1941-50; ANNUAL 1951 AND 1952

State	Acreage Harvested			Production		
	Average 1941-50	1951	1952	Average 1941-50	1951	1952
	Acres			Bushels		
California	4,963	4,417	6,139	2,062,079	2,188,290	2,955,060
Colorado	3,953	3,463	3,622	1,240,788	1,264,005	639,435
Georgia	11	0	0	470	0	0
Idaho	6,565	7,137	7,450	1,099,037	1,497,666	1,774,756
Iowa	1851	72	140	29,7541	14,400	28,000
Kentucky	28	18	13	3,650	3,680	868
Louisiana	323	0	0	9,033	0	0
Maine	40,729	33,967	47,344	16,254,627	16,456,724	19,381,572
Maryland	163	82	40	29,914	19,640	10,625
Michigan	2,586	1,846	1,996	434,560	280,990	299,409
Minnesota	20,903	18,642	18,616	3,909,363	3,911,370	4,163,837
Montana	1,704	1,933	2,074	425,056	492,927	661,260
Nebraska	7,465	4,655	4,319	863,993	878,381	887,748
New Hampshire	101	26	38	37,056	11,729	18,700
New Jersey	311	135	90	49,319	24,727	15,483
New Mexico	7	0	0	2,200	0	0
New York	3,462	2,538	2,816	1,248,818	1,010,218	1,119,358
North Carolina	184	232	190	34,845	71,171	41,585
North Dakota	30,804	17,593	22,988	5,198,555	4,286,970	5,620,400
Ohio	1	0	0	280	0	0
Oregon	2,780	2,217	3,032	833,253	971,450	1,068,800
Pennsylvania	1,060	843	829	338,520	246,789	338,349
South Dakota	4,269	2,117	2,393	732,464	437,381	315,465
Tennessee	303	286	274	57,117	83,786	49,487
Utah	569	706	902	173,534	236,321	369,783
Vermont	427	446	430	167,005	233,881	229,225
Virginia	3	4	4	225	510	400
Washington	1,253	1,376	1,637	307,528	299,818	618,883
Wisconsin	3,419	4,610	5,268	937,067	1,569,950	2,054,350
Wyoming	1,816	724	496	260,204	138,041	92,785
TOTAL	140,245	109,995	133,140	36,722,400	36,630,815	42,755,620

¹ Short-time average.

TABLE 2
PRODUCTION OF CERTIFIED SEED POTATOES BY VARIETIES

State	Average 1946-50	1949	1950	1951	1952
	Bushels	Bushels	Bushels	Bushels	Bushels
COBBLER					
Colorado	142,544	113,800	93,136	32,899	26,215
Iowa	21,7181	15,455	12,916	8,000	10,200
Kentucky	1,391	2,440	63	420	234
Maine	3,044,916	1,473,654	1,827,182	1,983,870	2,139,423
Maryland	16,535	11,200	10,650	11,550	8,000
Michigan	10,096	11,522	14,834	5,565	8,725
Minnesota	2,986,857	2,696,870	2,977,024	2,045,214	1,848,244
Montana	650	1,250	1,400	0	0
Nebraska	860	81	176	1,225	0
New Hampshire	150	0	0	0	0
New Jersey	3,419	804	6,162	1,650	975
New York	54,222	59,312	60,080	51,129	60,522
North Dakota	1,785,874	850,000	1,200,000	721,500	635,000
Oregon	600	1,325	1,000	800	0
Pennsylvania	1,839	335	3,025	50	258
South Dakota	158,923	48,800	71,290	65,250	32,850
Tennessee	40	0	0	0	0
Utah	300	0	3,025	7,000	600
Vermont	620	0	235	666	1,000
Washington	1,223	625	0	0	0
Wisconsin	175,600	150,000	136,000	50,000	49,000
Wyoming	11,207	9,267	50	65	140
TOTAL	8,375,330	5,446,740	6,418,251	4,986,853	4,821,386
TRIUMPH					
California	2,073	3,663	0	0	0
Colorado	391,238	452,150	365,219	106,680	83,285
Idaho	8,173	715	9,000	0	850
Kentucky	14	0	0	0	0
Maine	51,545	32,957	55,481	65,548	79,891
Maryland	16	0	0	0	0
Minnesota	672,433	981,414	777,219	706,966	650,551
Montana	94,584	91,861	82,870	29,362	43,910
Nebraska	860,550	697,033	1,088,283	648,361	595,870
New Jersey	10	0	0	0	950
New York	2,575	3,124	5,140	6,681	8,400
North Dakota	2,802,528	2,600,000	2,700,000	1,908,950	1,800,000
Oregon	2,182	250	1,750	2,100	2,550
South Dakota	419,120	238,140	326,800	223,090	142,500
Tennessee	54,850	72,850	67,000	60,000	30,700
Utah	3,273	857	3,700	3,293	0
Washington	1,348	500	117	500	1,665
Wisconsin	235,200	325,000	151,000	140,000	71,350
Wyoming	219,673	127,236	78,820	94,436	40,389
TOTAL	5,827,386	5,627,750	5,712,449	3,995,967	3,552,861
RUSSET RURAL					
Colorado	14,289	13,000	27,652	7,986	17,795
Iowa	2751	0	0	0	0
Maine	67,559	39,203	69,069	131,801	98,373
Maryland	133	0	0	0	0
Michigan	249,169	182,982	179,820	138,871	151,743
Nebraska	1,780	0	1,523	0	0
New York	39,234	30,520	76,887	30,654	40,616
Pennsylvania	44,819	10,850	0	22,866	29,083
South Dakota	0	0	0	0	0
Wisconsin	136,340	100,000	155,000	160,000	87,000
Wyoming	0	0	0	0	0
TOTAL	553,542	376,555	509,951	492,178	432,610
RURAL NEW YORKER (ALSO CALLED WHITE RURAL OR SMOOTH RURAL)					
Colorado	17,435	23,555	23,263	9,921	14,200
Maryland	119	150	100	44	0
Michigan	7,518	8,854	14,671	7,600	9,860
Minnesota	0	0	0	0	0
New York	15,727	13,820	26,446	20,644	20,600
Pennsylvania	5,647	0	25,928	7,803	13,524
Wisconsin	9,950	14,000	18,000	5,500	5,000
TOTAL	56,396	60,379	108,418	51,512	63,184

(Continued on Page 42)



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50% and 75% DDT Spray Powders

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TABLE 2 (Continued)
PRODUCTION OF CERTIFIED SEED POTATOES

State	Average 1946-50	1949	1950	1951	1952
	Bushels	Bushels	Bushels	Bushels	Bushels
K A T A H D I N					
Colorado	58,761	44,610	86,510	54,596	39,100
Idaho	100	0	0	0	0
Iowa	9601	0	960	0	0
Kentucky	25	0	0	0	0
Maine	11,669,734	14,245,924	14,819,479	9,848,619	11,977,940
Maryland	431	975	0	65	0
Michigan	49,774	81,314	81,558	30,701	21,296
Minnesota	31,019	29,904	42,187	17,842	9,345
Montana	0	0	0	0	56
Nebraska	2,142	122	0	1,025	217
New Hampshire	4,318	2,250	4,000	1,350	0
New Jersey	25,541	19,178	37,260	16,162	8,961
New York	820,676	990,045	859,172	420,849	494,400
North Carolina	1421	300	0	0	0
North Dakota	3,650	2,000	14,000	82,500	1,500
Oregon	2,531	3,200	2,830	1,200	177,648
Pennsylvania	173,228	125,023	216,771	138,400	0
South Dakota	40	0	0	750	4,020
Tennessee	3,980	350	18,750	0	0
Utah	27	0	0	0	0
Vermont	95,452	141,680	128,220	81,675	66,700
Virginia	40	0	40	0	0
Washington	1,793	1,600	0	200	1,000
Wisconsin	131,400	170,000	150,000	100,000	99,000
TOTAL	13,074,908	15,858,475	16,461,737	10,795,934	12,901,183

C H I P P E W A					
Colorado	0	0	0	0	0
Idaho	1,803	700	133	0	0
Iowa	7001	0	0	0	0
Kentucky	0	0	0	0	0
Maine	2,606,634	4,525,865	2,139,712	538,158	713,844
Maryland	12	0	0	0	0
Michigan	24,605	18,983	34,497	12,642	10,797
Minnesota	36,879	69,273	24,187	8,906	12,325
New Jersey	6,139	6,750	9,870	4,246	2,682
New York	107,356	93,094	71,707	75,402	107,010
North Dakota	7,820	300	6,600	0	0
Oregon	923	2,200	1,500	1,200	600
Pennsylvania	2,355	0	10,300	320	850
South Dakota	2,620	0	0	0	0
Tennessee	40	0	0	0	7,585
Vermont	7,812	0	39,062	0	0
Washington	0	0	0	0	2,333
Wisconsin	402,200	470,000	421,000	250,000	275,600
TOTAL	3,207,759	5,187,165	2,758,568	890,874	1,133,626

W H I T E R O S E					
California	2,482,337	2,831,760	2,763,840	1,618,000	2,000,970
Colorado	21,030	15,290	8,386	3,576	18,430
Idaho	15,671	28,305	4,550	10,500	27,390
Minnesota	117,009	84,170	45,700	29,103	9,933
Montana	69,453	62,322	86,660	61,590	86,250
Nebraska	5,326	4,105	15,720	7,188	7,753
New Mexico	680	3,400	0	0	0
North Dakota	205,651	160,000	180,000	75,500	110,000
Oregon	418,425	225,000	389,950	352,250	353,750
South Dakota	1,770	0	0	0	0
Utah	196,443	170,833	247,820	128,220	73,690
Washington	220,198	134,660	152,000	131,169	270,035
Wisconsin	1,290	1,200	2,450	4,800	700
Wyoming	5,032	7,841	2,746	11,111	4,442
TOTAL	3,760,316	3,728,886	3,899,822	2,432,917	2,963,343

(Continued on Page 44)

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TABLE 2 (Continued)
PRODUCTION OF CERTIFIED SEED POTATOES

State	Average 1946-50	1949	1950	1951	1952
	Bushels	Bushels	Bushels	Bushels	Bushels
S E B A G O					
California	3,333 ¹	0	0	0	0
Colorado	992	0	0	0	0
Iowa	3,181 ¹	4,258	765	0	1,200
Kentucky	762 ¹	1,490	800	1,000	100
Maine	719,995	485,906	222,995	168,622	146,136
Maryland	4,263	7,000	13,050	82	0
Michigan	52,032	43,669	108,378	61,405	49,810
Minnesota	50,865	38,911	49,146	26,676	13,552
Montana	640	0	0	0	0
Nebraska	2,972 ¹	0	0	391	2,348
New Hampshire	510	0	0	0	0
New Jersey	290	0	0	0	0
New York	173,918	133,263	208,625	79,926	96,460
North Dakota	6,130	0	0	0	10,000
Oregon	3,481	210	500	0	0
Pennsylvania	21,479	25,980	6,753	16,532	18,318
South Dakota	8,610	0	2,150	0	0
Vermont	110	0	0	0	0
Virginia	0	0	0	0	0
Washington	5,746	2,800	1,333	1,199	1,500
Wisconsin	173,800	193,000	196,000	233,000	294,500
TOTAL	1,226,310	936,487	810,795	588,833	633,924
GREEN MOUNTAIN					
Maine	2,685,866	2,202,673	1,954,316	1,704,780	1,131,054
Maryland	83	375	0	0	0
Michigan	11,448	12,125	10,003	2,450	18,160
Minnesota	5,094	6,337	10,429	12,824	6,256
New Hampshire	20,220	13,500	20,000	9,000	17,000
New Jersey	212	0	0	0	0
New York	139,278	77,045	82,400	40,768	47,730
Pennsylvania	2,625	0	13,125	0	495
South Dakota	0	0	0	0	0
Tennessee	190	0	0	0	0
Vermont	87,222	122,705	111,390	82,556	70,750
Wisconsin	1,380	2,400	4,500	1,250	1,200
TOTAL	2,953,619	2,437,160	2,206,163	1,853,628	1,292,645
EARLY OHIO					
Iowa	856 ¹	780	1,300	800	1,800
Montana	15	0	0	0	0
Minnesota	110,561	76,630	69,176	116,436	98,383
North Dakota	118,930	34,000	35,000	76,200	50,300
Oregon	116	150	430	0	50
South Dakota	6,969	4,960	9,660	6,250	2,780
Wisconsin	0	0	0	2,000	2,600
TOTAL	237,447	116,520	115,566	201,686	155,613
B U R B A N K					
California	4,740	500	0	0	250
Minnesota	0	0	0	0	0
Oregon	29,446	36,500	27,780	24,600	61,200
Utah	1,583 ¹	3,166	0	0	0
Washington	2,035	200	300	0	400
TOTAL	36,854	40,366	28,080	24,600	61,850
R U S S E T B U R B A N K (NETTED GEM)					
California	448,960	275,250	871,150	490,490	806,840
Colorado	42,166	33,810	112,703	147,329	78,155
Idaho	1,507,368	1,441,280	2,509,562	1,487,166	1,745,966
Iowa	918 ¹	1,836	0	0	0
Michigan	6,183	10,087	4,752	2,837	4,600
Minnesota	150,233	249,404	166,372	156,448	201,192
Montana	381,439	375,835	601,065	393,190	517,744
Nebraska	0	0	0	0	315
New Jersey	0	0	0	125	0
North Dakota	19,404	39,000	38,000	24,400	15,000
Oregon	628,055	525,000	964,160	582,850	638,050
Pennsylvania	18,155 ¹	0	18,155	0	0
South Dakota	2,138 ¹	0	0	825	925
Utah	64,863	62,538	69,410	104,808	296,092
Washington	82,854	40,000	118,250	153,846	316,616
Wisconsin	51,880	105,000	115,000	170,000	342,400
Wyoming	3,682	1,687	6,470	7,952	26,054
TOTAL	3,392,796	3,160,727	5,595,049	3,722,266	4,989,950

TABLE 2 (Continued)
PRODUCTION OF CERTIFIED SEED POTATOES

State	Average 1946-50	1949	1950	1951	1952
	Bushels	Bushels	Bushels	Bushels	Bushels
H O U M A					
Maine	36,277	15,964	6,430	14,715	0
Maryland	0	0	0	0	0
New Hampshire	5,620	0	2,800	0	0
New York	17,001	3,375	23,770	6,320	7,050
Pennsylvania	220	0	0	0	0
Vermont	19,020	41,950	15,675	19,250	32,725
TOTAL	78,137	61,289	48,675	40,285	39,775

K E N N E B E C					
California	0	0	0	250	9,500
Colorado	0	0	0	8,415	8,350
Idaho	0	0	0	0	300
Iowa	0	0	0	0	1,200
Kentucky	0	0	0	105	34
Maine	234,270	20,168	448,372	1,502,999	1,850,929
Maryland	500	850	450	4,156	263
Michigan	0	0	0	2,740	2,190
Minnesota	15,448	0	15,448	74,840	249,129
Nebraska	0	0	0	166	2,150
New Jersey	0	0	0	1,898	1,840
New York	22,467	692	44,242	98,124	76,109
North Carolina	200	0	200	9,543	7,640
North Dakota	13,500	3,000	24,000	89,375	175,000
Oregon	660	0	660	2,550	2,800
Pennsylvania	3,649	0	3,649	28,423	49,432
South Dakota	20	0	20	100	1,700
Tennessee	955	0	955	4,878	0
Vermont	560	0	560	16,500	32,450
Virginia	90	0	90	260	100
Washington	0	0	0	999	8,491
Wisconsin	0	0	0	20,000	102,000
TOTAL	187,852	24,710	538,646	1,866,321	2,581,587

O N T A R I O					
Maine	78,726	38,274	196,243	300,526	914,677
Maryland	292	435	150	220	262
Michigan	9,150	0	9,150	1,980	6,620
Minnesota	0	0	0	625	0
Nebraska	3,137	0	3,137	773	507
New Hampshire	1,500	0	1,500	1,379	1,700
New York	60,134	139,040	62,010	108,216	94,512
North Dakota	20,000	0	20,000	0	0
Pennsylvania	2,294	3,411	2,073	0	0
Vermont	273	500	0	0	0
Wisconsin	59,233	70,000	100,000	65,000	136,350
TOTAL	151,324	251,660	394,261	478,719	1,154,628

E S S E X					
Kentucky	281	0	28	168	0
Maine	29,276	3,316	55,237	0	0
Maryland	300	250	350	0	0
Michigan	1,000	2,000	0	0	0
Minnesota	5,628	0	5,628	2,025	1,800
New Jersey	0	0	0	516	0
New York	58,060	151,065	48,595	32,096	22,656
North Carolina	9,442	500	27,800	27,785	12,635
North Dakota	46,000	12,000	80,000	3,850	—
Pennsylvania	12,484	20,762	14,077	525	—
Tennessee	2,080	0	2,080	9,275	1,827
Virginia	0	0	0	250	300
TOTAL	114,726	189,893	233,795	76,490	39,218

(Continued on Page 46)

TABLE 2 (Continued)
PRODUCTION OF CERTIFIED SEED POTATOES

State	Average 1946-50	1949	1950	1951	1952
	Bushels	Bushels	Bushels	Bushels	Bushels
S E Q U O I A					
Kentucky	1,685	2,890	1,120	1,220	250
Maine	44,120	79,723	62,208	44,151	26,720
Maryland	252	40	50	25	0
Michigan	11,275	21,018	9,869	5,025	10,150
Minnesota	2,528	80	87	0	0
New Jersey	505	1,226	562	130	0
New York	14,411	20,625	4,770	0	0
North Carolina	41,800	65,652	34,400	33,843	21,310
North Dakota	295	0	0	60	400
Pennsylvania	1,856	0	0	0	0
Tennessee	13,577	14,500	13,860	8,857	5,355
Vermont	232	0	0	0	0
Virginia	0	0	0	0	0
Wisconsin	20,950	37,000	3,850	0	350
TOTAL	153,486	233,754	130,776	93,311	64,535
P O N T I A C					
California	20,360	6,600	30,400	0	0
Colorado	25,689	27,025	25,328	98,467	104,120
Idaho	0	0	0	0	0
Iowa	2501	0	0	0	0
Maine	17,451	11,417	15,456	45,630	111,328
Maryland	1,799	100	3,100	1,531	1,750
Michigan	11,803	15,645	9,069	8,809	5,458
Minnesota	242,875	509,171	521,692	131,671	103,962
Montana	5,645	4,712	7,600	6,150	4,700
Nebraska	4,3981	7,181	1,615	0	0
New Hampshire	3331	400	0	0	0
New Jersey	251	0	0	0	0
New Mexico	2,210	2,800	0	0	0
New York	14,488	22,890	12,190	37,224	19,642
North Carolina	421	0	0	0	0
North Dakota	359,755	550,000	400,000	85,800	125,000
Oregon	390	500	1,330	2,650	5,400
Pennsylvania	6,6031	1,908	11,298	6,254	3,025
South Dakota	75,214	15,750	158,450	73,026	0
Vermont	1,320	0	6,600	15,400	20,500
Washington	3501	0	350	9,457	0
Wisconsin	37,990	52,000	72,750	84,000	400
Wyoming	381	1,472	0	676	2,538
TOTAL	822,285	1,229,571	1,277,228	606,745	507,823
T E T O N					
Maine	24,4821	19,943	89,971	69,107	159,115
Maryland	301	0	35	0	0
Michigan	501	0	0	0	0
Minnesota	4861	630	1,230	0	0
Nebraska	8151	0	815	0	0
New York	1,9251	0	0	0	0
Pennsylvania	149,389	322,822	145,425	24,096	41,252
Vermont	7,5421	5,175	17,050	9,500	5,000
Wyoming	1,801	215	1,625	230	0
TOTAL	180,646	348,785	256,151	102,933	205,367
M O H A W K					
Maine	86,782	180,976	93,319	26,213	7,174
Minnesota	115	0	0	0	0
New Jersey	1551	425	0	0	0
New York	2,562	6,750	1,430	0	0
New Hampshire	0	0	0	0	0
TOTAL	89,583	188,151	94,749	26,213	7,174
W A R B A					
Kentucky	0	0	0	0	0
Maine	6,744	4,177	4,333	0	0
Maryland	11	0	0	0	0
Minnesota	25,867	29,112	2,371	1,200	0
Montana	0	0	0	0	0
Pennsylvania	0	0	0	300	0
New York	256	438	143	0	0
North Dakota	11,985	3,000	6,400	0	0
South Dakota	9121	0	0	0	0
TOTAL	45,593	36,727	13,247	1,500	0

TABLE 2 (Continued)
PRODUCTION OF CERTIFIED SEED POTATOES

State	Average 1946-50	1949	1950	1951	1952
	Bushels	Bushels	Bushels	Bushels	Bushels
RED W A R B A					
Colorado	12,976	0	0	7,515	8,100
Iowa	1,6361	2,220	1,925	800	0
Maryland	6	0	0	0	0
Minnesota	136,045	122,343	125,351	133,506	69,045
Nebraska	27,485	16,785	26,981	44,110	17,230
North Dakota	179,411	120,000	200,000	194,710	145,000
Pennsylvania	0	0	0	985	0
South Dakota	25,326	39,300	5,160	9,325	250
Wisconsin	27,630	20,000	35,000	40,000	67,000
Wyoming	8,372	0	0	0	0
TOTAL	418,560	320,648	394,417	430,951	306,625
RED M c C L U R E					
Colorado	840,583	1,014,263	738,805	751,471	210,810
Wisconsin	4,5001	0	4,500	10,500	14,350
Wyoming	57	0	0	0	0
TOTAL	841,540	1,014,263	743,305	761,971	225,160
RED P O N T I A C					
California	0	0	0	78,300	137,500
Iowa	0	0	0	4,800	3,600
Maryland	131	0	0	88	0
Michigan	0	0	0	365	0
Minnesota	197,6231	144,184	421,236	348,153	630,722
Nebraska	27,4551	0	27,455	14,406	38,223
New York	0	0	0	200	2,135
North Dakota	724,7001	900,000	1,500,000	992,200	2,500,000
Pennsylvania	0	0	0	0	4,350
South Dakota	21,0501	0	21,050	40,920	112,400
Washington	0	0	0	0	13,043
Wisconsin	11,7001	900	22,500	113,400	226,500
Wyoming	2,3461	3,015	1,677	3,899	2,081
TOTAL	892,0781	1,048,099	1,993,918	1,596,736	3,670,554

(Continued on Page 48)

The Cream of a



Great Maine Crop

Top Quality Maine Certified Seed

**MAINE POTATO GROWERS, INC.**

PRESQUE ISLE

MAINE

TABLE 2 (Continued)
PRODUCTION OF CERTIFIED SEED POTATOES

State	Average 1946-50	1949	1950	1951	1952
	Bushels	Bushels	Bushels	Bushels	Bushels
P R O G R E S S					
Colorado	0	0	0	6,030	14,900
Idaho	0	0	0	0	250
Maryland	251	0	25	78	0
Montana	0	0	0	0	4,750
Nebraska	60,261	67,751	93,313	136,282	169,287
Wyoming	7,420	7,570	7,269	19,071	14,862
TOTAL	65,215	75,321	100,607	161,461	204,049
W A S E C A					
Minnesota	15,985	15,606	39,121	62,856	37,166
North Dakota	1,600	0	1,600	6,400	0
TOTAL	16,385	15,606	40,721	69,256	37,166
S A T A P A					
Minnesota	13,815	19,656	25,384	3,820	3,300
South Dakota	180	360	0	0	0
TOTAL	13,901	20,016	25,384	3,820	3,300
R U S S E T S E B A G O					
Kentucky	0	0	0	105	250
Oregon	0	0	0	150	300
Wisconsin	29,760	64,200	60,000	116,400	236,350
TOTAL	29,760	64,200	60,000	116,655	236,900
C H E R O K E E					
Iowa	0	0	0	0	10,000
Maryland	0	0	0	38	0
Minnesota	0	0	0	31,804	218,932
New York	0	0	0	0	7,160
South Dakota	0	0	0	0	180
Wisconsin	0	0	0	0	20,000
TOTAL	0	0	0	31,842	256,272
L A S O D A					
Maryland	501	0	50	88	0
Nebraska	4,777	0	4,777	13,558	39,803
South Dakota	0	0	0	14,625	21,450
Tennessee	0	0	0	26	0
Wisconsin	0	0	0	0	20,000
Wyoming	0	0	0	0	2,276
TOTAL	4,827	0	4,827	28,297	83,529
D E S O T O					
Colorado	662	0	0	22,354	12,725
Nebraska	151	0	0	0	0
South Dakota	1,334	0	0	0	0
Wyoming	0	0	0	601	0
TOTAL	1,876	0	0	22,955	12,725
W H I T E C L O U D					
Maryland	251	0	25	55	0
Nebraska	1,332	855	1,810	9,856	9,830
TOTAL	1,345	855	1,835	9,911	9,830
Y A M P A					
Colorado	0	0	0	6,766	3,250
Maryland	250	0	250	150	0
Nebraska	4,276	536	8,017	1,040	4,235
Wyoming	434	161	706	0	0
TOTAL	4,835	697	8,973	7,956	7,485
C O L U M B I A R U S S E T					
North Dakota	6,475	0	6,000	0	0
South Dakota	0	0	0	3,540	0
TOTAL	6,475	0	6,000	3,540	0

TABLE 2 (Continued)
PRODUCTION OF CERTIFIED SEED POTATOES

State	Average 1946-50 Bushels	1949 Bushels	1950 Bushels	1951 Bushels	1952 Bushels
K A S O T A					
Maryland	271	50	0	0	0
Minnesota	0	0	0	0	0
Montana	4,189	5,775	6,400	2,525	3,850
Nebraska	1,796	0	0	0	0
Wyoming	1,700	0	0	0	0
TOTAL	7,701	5,825	6,400	2,525	3,850
BRITISH QUEEN					
California	1,440	1,000	2,000	1,250	0
Oregon	2,881	1,200	1,100	700	0
TOTAL	3,750	2,200	3,100	1,950	0
E A R L Y R O S E					
Maine	281	57	0	0	0
Oregon	2,040	1,900	6,330	0	2,600
Vermont	0	0	0	0	0
Washington	8291	450	2,200	1,332	1,600
TOTAL	2,714	2,407	8,530	1,332	4,200
P L A C I D					
New York	552	0	720	1,170	5,460
B E A U T Y O F H E B R O N					
Oregon	6431	850	580	400	0
Washington	538	400	500	450	1,200
TOTAL	924	1,250	1,080	850	1,200
C A N O G A					
New York	1951	0	195	750	470
C A N U S					
North Dakota	3,2331	7,200	0	0	0
South Dakota	3151	0	315	430	0
TOTAL	3,3381	7,200	315	430	0
A S H W O R T H					
Kentucky	1281	0	128	392	0
New York	9621	1,925	0	0	0
TOTAL	1,0261	1,925	128	392	0
C H E N A N G O					
Kentucky	1311	0	131	270	0
New York	3,4091	1,760	5,946	37	226
Pennsylvania	2881	577	0	0	0
TOTAL	3,6451	2,337	6,077	307	226
M A R Y G O L D					
Maryland	5571	600	375	269	0
D A K O T A R E D (Jersey Redskin)					
Maryland	823	0	0	156	350
New Jersey	1,123	1,602	1,890	0	75
TOTAL	1,947	1,602	1,890	156	425
W H I T E P O N T I A C					
Maryland	1701	120	350	88	0
P U N G O					
Maryland	501	0	50	75	0
P O T O M A C					
Maryland	116	60	50	50	0
S N O W D R I F T					
New York	1761	300	52	28	200
Pennsylvania	3751	0	375	0	0
TOTAL	3641	300	427	28	200
M A D I S O N					
Maryland	251	0	25	0	0
New York	2,7791	788	4,770	0	0
TOTAL	2,7921	788	4,795	0	0
M E N O M I N E E					
Iowa	2251	0	0	0	0
Maryland	128	0	0	0	0
Michigan	13,218	6,800	4,420	0	0
New York	0	0	0	0	0
North Dakota	2,678	0	0	0	0
Pennsylvania	1,168	0	0	0	0
Tennessee	0	0	0	0	0
Wisconsin	2,790	2,200	0	0	0
TOTAL	20,162	9,000	4,420	0	0

(Continued on Page 50)

TABLE 2 (Continued)
PRODUCTION OF CERTIFIED SEED POTATOES

State	Average 1946-50	1949	1950	1951	1952
	Bushels	Bushels	Bushels	Bushels	Bushels
CAL ROSE					
California	220,980	18,000	4,200	0	0
Maryland	501	100	0	0	0
Oregon	4581	0	80	0	0
Washington	10,5991	0	0	0	0
TOTAL	227,745	18,100	4,280	0	0
CHISAGO					
Minnesota	1,7241	0	4,170	0	0
EARLIEST OF ALL					
Oregon	4,295	5,000	3,460	0	0
Washington	467	0	0	0	0
TOTAL	4,761	5,000	3,460	0	0
GOLD COIN					
Oregon	8661	1,200	330	0	0
Washington	492	500	130	0	0
TOTAL	1,185	1,700	460	0	0
CAYUGA					
North Dakota	10,000	20,000	0	0	0
ERIE					
Michigan	6,135	730	0	0	0
New York	10,560	0	0	0	0
Ohio	40	0	0	0	0
Pennsylvania	7,2731	13,500	0	0	0
Wisconsin	100	0	0	0	0
TOTAL	22,654	14,230	0	0	0
PAWNEE					
Colorado	5,152	5,210	0	0	0
Maine	8181	0	0	0	0
Maryland	11	0	0	0	0
New Jersey	1,093	880	0	0	0
TOTAL	6,911	6,090	0	0	0
BROWN BEAUTY					
Colorado	6,308	3,960	0	0	0
EMPIRE					
Maryland	381	0	0	0	0
New York	732	700	0	0	0
TOTAL	762	700	0	0	0
HARMONY BEAUTY					
Maine	1481	297	0	0	0
LA SALLE					
North Dakota	6,6671	0	0	0	0
South Dakota	3,216	0	0	0	0
TOTAL	7,216	0	0	0	0
VARIETIES NOT CLASSIFIED					
California	2,5621	1,125	4,000	0	0
Idaho	244	0	0	0	0
Maine	269	0	0	11,985	24,968
Maryland	8131	1,410	825	832	0
Minnesota	18,499	39,976	0	450	0
Montana	0	0	0	290	0
New York	350	0	0	0	0
North Dakota	17,025	2,500	18,750	25,525	55,000
Oregon	36	0	0	0	0
Pennsylvania	6881	0	30	235	114
South Dakota	3,0381	0	0	0	430
Vermont	0	0	0	2,000	500
Wisconsin	4,200	0	4,200	4,100	2,700
TOTAL	34,150	45,011	27,805	45,327	83,712

PRODUCTION AND MARKETING ADMINISTRATION

United States Department of Agriculture

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POTATOES (IRISH): PRODUCTION AND FARM DISPOSITION IN THE 36 LATE AND INTERMEDIATE STATES CROP OF 1951 (Revised)

GROUP AND STATE	Production	Fed to live-stock, shrinkage, and loss after harvest	FARM DISPOSITION		Sold	
			For farm house-hold use	Used for seed on farms where grown	Quantity	Per cent of crop
LATE STATES:		Thousand bushels				Per cent
Maine	44,500	1,113	442	2,506	40,439	91
New Hampshire	975	59	136	32	748	77
Vermont	738	41	208	52	437	59
Massachusetts	1,886	75	129	8	1,674	89
Rhode Island	1,060	43	14	3	1,000	94
Connecticut	2,252	124	98	7	2,023	90
New York - L.I.	14,400	288	48	102	13,962	97
New York - Upstate ..	13,500	810	957	842	10,891	81
Pennsylvania	16,215	892	1,140	539	13,644	84
West Virginia	1,575	134	1,040	99	302	19
9 EASTERN	97,101	3,579	4,212	4,190	85,120	87.7
Ohio	5,750	201	760	71	4,718	82
Indiana	3,360	118	675	70	2,497	74
Illinois	825	74	590	27	224	27
Michigan	10,800	1,296	1,344	801	7,359	68
Wisconsin	9,805	686	1,530	623	6,966	71
Minnesota	11,900	1,309	1,200	700	8,691	73
Iowa	1,040	89	490	40	421	40
North Dakota	13,320	733	600	973	11,014	83
South Dakota	1,650	132	294	99	1,125	68
9 CENTRAL	58,450	4,638	7,393	3,404	43,015	73.6
Nebraska	5,890	412	540	256	4,682	79
Montana	2,150	258	175	109	1,608	75
Idaho	36,680	2,568	216	1,518	32,378	88
Wyoming	1,202	102	25	55	1,020	85
Colorado	12,240	1,102	98	1,039	10,001	82
New Mexico	144	10	12	3	119	83
Utah	2,214	211	100	112	1,791	81
Nevada	364	29	18	22	295	81
Washington	10,920	1,583	200	76	9,061	83
Oregon	10,240	870	172	412	8,786	86
California - Late	13,330	533	54	294	12,449	93
11 WESTERN	95,374	7,678	1,610	3,896	82,190	86.2
29 LATE STATES	250,925	15,895	13,215	11,490	210,325	83.8
INTERMEDIATE STATES						
New Jersey	7,476 ²	1,122 ²	53	62	6,239	83
Delaware	940	52	67	13	808	86
Maryland	1,230	61	260	27	882	72
Virginia	6,882	275	880	71	5,656	82
Kentucky	1,960	147	1,266	65	482	25
Missouri	1,568	94	1,196	16	262	17
Kansas	368	37	260	8	63	17
7 INTERMEDIATE STATES	20,424	1,788	3,982	262	14,392	70.5
36 LATE AND INTERMEDIATE STATES	271,349	17,683	17,197	11,752	224,717	82.8

¹ Consists of potatoes sold for all purposes including food, seed, processing and livestock feed.

² Includes an estimated 1,093,000 bushels of early commercial crop not marketed because of low prices.

NUMBER OF POUNDS TO A BUSHEL

Alfalfa	60	Corn (Kafir)	56	Onions	57
Apples (Green)	48	Corn Meal	50	Orchard Grass	14
Apples (Dried)	24	Cranberries	32	Peaches (Dried)	33
Barley	48	Coal, Hard	80	Peas	60
Beans (White)	60	Coal, Char-	20	Potatoes	60
Beans (Castor)	46	Coke	40	Potatoes (Sweet)	50
Beans (Soy)	60	Flax Seed	56	Rape	59
Bran	20	Grapes	40	Red Top Seed	14
Buckwheat	48	Hair (Plastering)	8	Rye	56
Blue-Grass Seed	14	Hemp Seed	44	Sudan Grass	32
Cherries	40	Kafir Corn	56	Timothy Seed	45
Clover Seed	60	Lime	80	Tomatoes	60
Clover (Sweet)	60	Malt	38	Turnips	55
Corn (Shelled)	56	Millet Seed, Common	50	Wheat	60
Corn (In Ear)	70	Millet, Hungarian	48	(Legal weights vary slightly in some states.)	
Corn (Pop) (In Ear) ..	70	Oats	32		

POTATOES (IRISH): PRODUCTION AND FARM DISPOSITION IN THE 36 LATE AND INTERMEDIATE STATES CROP OF 1952 (Preliminary)

For the 36 late and intermediate States, production in 1952 was estimated at 294,892,000 bushels, compared with the 1951 crop of 271,349,000 bushels. Sales for all purposes from the 1952 production in these States are expected to amount to 248,500,000 bushels, or 84 per cent of the crop. An estimated 224,717,000 bushels, or 83 per cent of the 1951 crop were sold. In these States, 18,212,000 bushels, or 6.2 per cent of the 1952 crop, are expected to be fed to livestock on farms where grown and lost through shrinkage and waste. Comparable figures for the 1951 crop are 17,683,000 bushels and 6.5 per cent. This latter figure contains 1,093,000 bushels of the early commercial crop in New Jersey withheld from the market under a marketing agreement order. An estimated 15,085,000 bushels of 1952-crop potatoes are expected to be eaten on farms where grown, compared with 17,197,000 bushels from the preceding year's production. There was a further decline in the number of farms harvesting potatoes last year and dry weather reduced "farm-crop" yields in the intermediate and Central late States. Growers in the late and intermediate States are expected to use 13,095,000 bushels of last year's crop for seed on farms where produced, compared with 11,752,000 bushels from the preceding year's production.

GROUP AND STATE	INDICATED FARM DISPOSITION					Per cent of crop
	Pro- duction	Fed and to be fed to live- stock, shrink- age, and loss after harvest	Used and saved for farm household use	Saved for seed on farms where grown	Sold and for sale	
					Quan- tity ¹	
LATE STATES:						
		Thousand bushels				Per cent
Maine	52,200	1,305	446	3,154	47,295	91
New Hampshire	1,046	53	127	22	844	81
Vermont	774	42	202	54	476	61
Massachusetts	1,702	77	137	6	1,482	83
Rhode Island	1,152	52	16	3	1,081	94
Connecticut	2,218	111	98	8	2,001	90
New York - L.I.	17,225	344	55	157	16,669	97
New York - Upstate ..	13,500	1,688	922	832	10,058	75
Pennsylvania	14,400	1,152	1,116	524	11,608	81
West Virginia	1,190	90	858	90	152	11
9 EASTERN	105,407	4,914	3,977	4,850	91,666	87.0
Ohio	4,800	312	700	83	3,705	77
Indiana	2,520	113	392	50	1,965	78
Illinois	520	28	336	18	138	27
Michigan	10,360	1,036	1,280	917	7,127	69
Wisconsin	12,040	723	1,372	585	9,360	78
Minnesota	12,240	918	1,248	673	9,401	77
Iowa	1,250	81	566	61	542	43
North Dakota	14,040	1,053	598	1,037	11,352	81
South Dakota	1,265	95	290	96	784	62
9 CENTRAL	59,035	4,359	6,782	3,520	44,374	75.2
Nebraska	7,595	722	520	251	6,102	80
Montana	2,572	257	170	118	2,027	79
Idaho	42,780	2,353	220	1,804	38,403	90
Wyoming	1,680	328	30	80	1,242	74
Colorado	20,020	1,901	120	1,206	16,793	84
New Mexico	80	4	11	3	62	78
Utah	3,162	237	96	102	2,727	86
Nevada	527	52	20	27	428	81
Washington	10,660	746	176	74	9,664	91
Oregon	11,385	1,024	150	543	9,668	85
California - Late	15,960	798	59	259	14,844	93
11 WESTERN	116,421	8,422	1,572	4,467	101,960	87.6
29 LATE STATES	280,863	17,695	12,331	12,837	238,000	84.7
INTERMEDIATE STATES:						
New Jersey	4,836	145	53	63	4,575	95
Delaware	862	26	52	13	771	89
Maryland	781	24	176	30	551	71
Virginia	4,692	150	595	63	3,884	83
Kentucky	1,558	110	1,048	67	333	21
Missouri	1,080	54	700	18	308	29
Kansas	220	8	130	4	78	35
7 INTERMEDIATE STATES	14,029	517	2,754	258	10,500	74.8
36 LATE & INTERMEDIATE STATES	294,892	18,212	15,085	13,095	248,500	84.3

¹ Consists of potatoes sold and to be sold for all purposes, including food, seed, processing and livestock feed.

UNITED STATES FOREIGN TRADE IN POTATOES 1952¹

Exports

Exports of potatoes from the United States in calendar year 1952 totaled 5.8 million bushels. This was 26 per cent more than in 1951 but 53 per cent less than the exports in the record years 1948 and 1950 when in each year 12.4 million bushels were exported.

Canada was the largest receiver in 1952 with 3.6 million bushels or 61 per cent of the total. Cuba was second with 1.3 million bushels or 23 per cent. In most years Cuba is a larger taker than Canada and is the more consistent in point of quantity taken each year. Canada's annual take fluctuates widely in quantity—350,000 bushels in 1948 and 3.6 million in 1952. Cuba took 1.3 million bushels in 1952 which was roughly equivalent to the usual annual take. These countries are regular importers buying in the United States potato market every year.

Countries other than Cuba and Canada receiving United States potatoes may be classified into 3 groups. (1) Six regular importers which together take from 1.0 million to 2.5 million bushels each year, (2) about 15 regular importers which together take from 100,000 to 200,000 bushels each year and (3) irregular importers whose trade with the United States has been sporadic. They have been in and out of the market from year to year.

The first group includes Mexico, the Netherland West Indies, Republic of Panama, Panama Canal Zone, Venezuela and the Philippines. Together they took 878,000 bushels in 1952 which was the smallest quantity in several years. It was only 49 per cent of the record 1.8 million bushels taken in 1951, but about double the annual take in prewar years. During the last decade exports to these countries have been ranging near 1.5 million bushels each year. The drop in 1952 occurred mostly in Venezuela and the Philippines. Exports to Mexico in 1952 were the largest in history 480,000 bushels compared with 440,000 in 1951 and the usual range of near 300,000 bushels per year.

The second group includes Brazil, Columbia, and countries in Central America and the Caribbean. Liberia, Saudi Arabia, French Oceania and Japan are also in this group. Together, these 15 countries took less than 80,000 bushels in 1952. Their usual imports range from 100,000 to 200,000 bushels per year. The 1952 take was the smallest in several years but they are consistent customers appearing in the United States market season after season.

In the irregular group of customers are Germany, Belgium, Greece, Spain and Portugal. They took no potatoes in 1952, very few in 1951 but large shipments in 1950 and 1948. It was these shipments which made the all-time record United States exports of 1950 and 1948. Of the total 12.4 million bushels exported in each of these years these countries took 7 to 8 million bushels. They took none in the prewar period 1935-39. Much of their take was under the United States relief programs.

Imports

Imports of potatoes in 1952 totaled 3.2 million bushels, 28 per cent less than in 1951 and more than 3 times the prewar average of 1.0 million bushels per year. The record occurred in 1949 when 9.6 million bushels were imported. Over the past 2 decades Canada has supplied upwards 95 to 100 per cent of the total United States imports in every year. Infrequently small imports have been obtained from Cuba and Mexico and rarely from Spain and a few other countries. Of the 3.2 million bushels imported in 1952 Canada supplied 80 per cent, Spain 19 per cent and Cuba and other countries 1 per cent. This shipment from Spain was the first since 1935 and 1936 when in each year less than 1,000 bushels were imported from this source. Of the 2.6 million bushels imported from Canada in 1952, 1.9 million were seed stock. The major part of potato imports from Canada are seed potatoes in every year. Among the reasons for lack of imports from countries other than Canada is the United States quarantine against countries infested with transmittable potato diseases and nematodes.—By Orval E. Goodsell.

¹ Reprinted from Foreign Agriculture Circular, prepared by United States Department of Agriculture, Foreign Agricultural Service, April 1953, Washington, D. C.

**POTATOES: United States exports by countries of destination,
average 1935-39 and 1945-49, annual 1948-52**

Countries	Average		1948	1949	Annual 1950	1951	1952
	1935-39 1,000 bushels	1945-49 1,000 bushels					
Canada	379.1	2,071.1	347.5	554.0	1,587.8	1,176.4	3,550.3
Cuba	854.0	1,668.2	1,581.8	1,351.7	1,763.3	1,349.4	1,323.2
Mexico	56.6	343.1	298.9	274.4	252.4	440.1	479.6
Curaçao	18.2	116.5	90.7	58.2	67.4	72.0	28.7
Panama, Canal	1	170.3	167.4	130.6	96.7	105.7	74.6
Panama, Republic	178.52	11.2	20.2	6.0	63.4	56.7	64.5
Philippines	157.7	290.2	396.3	394.1	222.4	179.5	52.1
Venezuela	83.5	427.4	718.3	494.2	956.0	933.8	178.6
Bahamas	3	9.2	11.6	3.6	5.8	4.8	11.1
Bermuda	1.1	10.6	3.8	3.3	2.7	6.5	9.3
Brazil	0.1	47.6	69.7	7.4	4	0.1	0.4
British Honduras	1.6	7.7	8.8	8.1	6.0	8.3	6.0
Columbia	11.7	19.8	34.5	2.6	142.7	7.0	0.3
Dominican Republic	1.6	14.6	21.8	2.4	2.5	10.9	13.5
French Oceania	4.1	5.1	2.1	7.7	9.4	12.9	2.3
Guatemala	1.6	0.3	0.2	0.2	0.2	0.4	4
Haiti	4.9	4.6	10.2	2.9	2.7	8.1	12.2
Jamaica	0.7	1.1	1.7	0.9	0.5	9.6	0.8
Japan	3	9.6	7.6	40.1	2.6	1.6	0.4
Liberia	3	1.2	1.4	1.3	1.4	1.7	1.2
Leeward and Windard	3	0.1	4	0.3	0.8	1.3	1.8
Nicaragua	1.8	1.0	0.9	0.8	0.5	0.4	0.1
Saudi Arabia	3	6.2	10.5	15.0	5.6	11.9	19.4
Germany	0	1,488.0	7,020.0	1.1	1,658.4	0	0
Belgium	3	271.9	0.2	0	183.3	0	0
Greece	3	379.7	767.0	659.3	79.9	16.5	0
Spain	3	154.8	0	0	3,358.6	0	0
Portugal	3	173.8	0	0	1,098.8	0	0
Others	181.95	1,572.25	846.3	26.2	876.36	205.4	1.4
Total	1,938.7	9,277.1	12,439.4	4,046.4	12,448.1	4,621.0	5,831.8

1 Included in Panama Republic.

2 Includes Panama Canal Zone.

3 If any included in others.

4 Less than 500 bushels.

5 Includes 127.3 in 1935-39 and 685.0 in 1945-49 to Argentina.

6 Includes 679.5 to Palestine.

SOURCE: Bureau of Census.

**POTATOES: United States imports by countries of origin,
averages 1935-39 and 1945-49, annual 1948-52**

Countries	Average		1948	1949	Annual 1950	1951	1952
	1935-39 1,000 bushels	1945-49 1,000 bushels					
Table Stock							
Canada	241	2,154	2,078	2,276	2,890	1,737	730
Cuba	29	3	0	12	0	0	25
Spain	1	0	0	0	0	0	618
Bermuda	11	0	0	0	0	0	0
Others	2	1	1	0	0	1	1
Total Table Stock	283	2,157	2,078	2,288	2,890	1,738	1,374
Seed							
Canada	731	3,606	4,098	7,286	3,643	2,797	1,874
Total All	1,014	5,763	6,176	9,574	6,533	4,535	3,248

1 Less than 500 bushels.

2 All from Canada except in 1951, 366 bushels from Mexico and in 1952, 4,284 bushels from Mexico and 8,882 bushels from Cuba.

SOURCE: Bureau of Census.

**PRICES AND VALUES OF 1951 AND 1952 CROPS,
BY STATES—POTATOES^{1*}**

GROUP AND STATE	Season average price per bushel received by farmers		Value of production	
	1951	1952 ²	1951	1952 ²
	Dollars		Thousand dollars	
LATE STATES:				
Maine	1.78	2.15	79,210	112,230
New Hampshire	2.28	3.10	2,223	3,243
Vermont	2.19	3.15	1,616	2,438
Massachusetts	1.77	2.85	3,338	4,851
Rhode Island	1.85	2.90	1,961	3,341
Connecticut	2.21	2.90	4,977	6,432
New York	1.48	2.45	41,292	75,276
Pennsylvania	1.95	2.75	31,619	39,600
West Virginia	2.00	3.10	3,150	3,689
9 EASTERN	1.74	2.38	169,386	251,100
OHIO AND CENTRAL STATES:				
Ohio	1.74	3.05	10,005	14,640
Indiana	1.94	2.90	6,518	7,308
Illinois	1.80	3.05	1,485	1,586
Michigan	1.97	2.60	21,276	26,936
Wisconsin	1.67	2.40	16,374	28,896
Minnesota	1.77	2.35	21,063	28,764
Iowa	1.85	2.80	1,924	3,500
North Dakota	1.72	2.15	22,910	30,186
South Dakota	1.75	2.40	2,888	3,036
9 CENTRAL	1.79	2.45	104,443	144,852
WESTERN STATES:				
Nebraska	1.52	1.75	8,953	13,291
Montana	2.11	2.55	4,536	6,559
Idaho	1.37	1.75	50,252	74,865
Wyoming	1.84	2.15	2,212	3,612
Colorado	1.86	2.05	22,766	41,041
New Mexico	1.59	2.25	229	180
Utah	1.98	2.00	4,384	6,324
Nevada	2.22	2.15	808	1,133
Washington	1.34	1.90	14,633	20,254
Oregon	1.66	2.05	16,998	23,339
California	1.90	2.60	25,327	41,496
11 WESTERN	1.58	1.99	151,098	232,094
29 LATE STATES	1.69	2.24	424,927	628,046
INTERMEDIATE POTATO STATES:				
New Jersey	1.11	2.30	7,085 ³	11,123
Delaware	1.18	2.70	1,109	2,327
Maryland	1.22	2.70	1,501	2,109
Virginia	1.27	3.00	8,740	14,076
Kentucky	1.47	2.65	2,881	4,129
Missouri	1.65	2.40	2,587	2,592
Kansas	1.55	2.25	570	495
7 INTERMEDIATE STATES	1.27	2.63	24,473	36,851
36 LATE AND INTERMEDIATE STATES	1.66	2.25	449,400	664,897

* Reprinted from Agricultural Prices, Season Average Prices and Value of Production prepared by: United States Department of Agriculture, Bureau of Agricultural Economics December 1952, Washington, D. C.

PRICES AND VALUES OF 1951 AND 1952 CROPS, BY STATES—POTATOES^{1*}

GROUP AND STATE	Season average price per bushel received by farmers		Value of production	
	1951	1952 ²	1951	1952 ²
	Dollars		Thousand dollars	
EARLY STATES:				
North Carolina	1.31	2.50	8,358	13,640
South Carolina	1.52	2.98	2,944	5,507
Georgia	1.55	2.99	749	1,345
Florida	1.84	2.44	11,631	18,607
Tennessee	1.46	2.85	2,247	3,876
Alabama	1.20	2.23	5,059	9,183
Mississippi	1.73	3.20	903	1,434
Arkansas	1.65	3.05	1,825	2,379
Louisiana	1.67	2.70	1,242	2,060
Oklahoma	1.79	2.95	942	1,180
Texas	1.88	2.55	4,144	5,202
Arizona	1.60	2.50	2,219	3,792
California	1.40	2.35	30,527	60,630
13 EARLY STATES	1.48	2.45	72,790	128,835
UNITED STATES	1.63	2.28	522,190	793,732

¹ Estimates for each State cover the entire crop, whether commercial or noncommercial, early or late.

² The 1952 price and value figures are preliminary.

³ Production includes some quantities of commercial early potatoes not marketed and excluded in computing value.

For potatoes, the beginning of the crop marketing season varies between states from December 1 preceding year shown for Florida and Texas to August 1 of the year shown for certain northern states. The marketing season comprises 12 months in all states except California, which has a 14 month season beginning April 1 of the year shown. The values shown are for the marketing season or crop year and should not be confused with calendar year income.

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POTATOES: ACREAGE HARVESTED, YIELD PER ACRE AND PRODUCTION IN THE UNITED STATES, CROP OF 1952 WITH COMPARISONS*

POTATOES: Estimated potato production of 347,504,000 bushels is just a little short of the National goal of 350 million bushels but 8 per cent larger than last year's short crop of 320,519,000 bushels. The 1941-50 average production was 414,525,000 bushels. Potatoes were harvested from 1,398,000 acres, or 5 per cent more than the 1,334,000 acres dug in 1951. Abandonment of acreage was small as only limited acreage was "drowned out" and conditions were excellent for harvest of the late crop. The U. S. yield, now placed at 249 bushels per acre, has been exceeded only by the record yield of 253 bushels harvested in 1950. The National yield per acre was exceptionally high despite a sharp reduction in Maine's yield, as record or near-record yields were realized in most late potato areas of the West.

Compared with last year, there was an increase in the acreage harvested in the early and late potato States, but a decrease in the intermediate group. For the late States, acreage harvested was increased 15 per cent in the East, 7 per cent in the West and less than 1 per cent in the central part of the country. The sharp increase in the East is due largely to a 45 per cent increase in Maine. Florida, Arizona and California are the only early potato States showing an increase in the acreage harvested this year. These are the three early States with the highest yield per acre and most acreage in them is strictly commercial. There was a decrease in the acreage harvested in each of the intermediate States with this group showing a reduction of 9 per cent.

For the 29 late potato States, which provide storage supplies for winter and spring, production is estimated at 280,863,000 bushels, compared with 250,925,000 bushels last year. All parts of the Country shared in this increase of nearly 30 million bushels, with the West up 21 million, the East 8.3 million, and the central part of the Country 0.6 million. Recorded movement indicates marketings to date from the late States have been at a faster rate than during the comparable months of 1951.

POTATOES ¹									
Group and State	Acres harvested			Yield per acre			Production		
	Average 1941-50	1951	1952	Average 1941-50	1951	1952	Average 1941-50	1951	1952
	Thousand acres			Bushels			Thousand bushels		
LATE STATES:									
Maine	180	100	145	348	445	360	61,882	44,500	52,200
New Hampshire	6.2	3.9	4.1	198	250	255	1,186	975	1,046
Vermont	9.2	4.1	4.3	163	180	180	1,405	738	774
Massachusetts	17.8	8.2	8.3	187	230	205	3,157	1,886	1,702
Rhode Island	5.9	4.0	4.7	223	265	245	1,293	1,060	1,152
Connecticut	15.4	7.9	8.7	217	285	255	3,207	2,252	2,218
N.Y., L.I.	61	48	53	271	300	325	16,415	14,400	17,225
N.Y., Up-State	105	54	54	173	250	250	16,768	13,500	13,500
Pa.	128	69	64	168	235	225	19,990	16,215	14,400
West Virginia	27	15	14	102	105	85	2,694	1,575	1,190
9 EASTERN	555.6	314.1	360.1	239.4	309.1	292.7	127,997	97,101	105,407
Ohio	55	25	24	156	230	200	7,656	5,750	4,800
Indiana	31	14	12	151	240	210	4,348	3,360	2,520
Illinois	19.6	7.5	6.5	91	110	80	1,721	825	520
Michigan	142	60	56	126	180	185	16,958	10,800	10,360
Wisconsin	118	53	56	122	185	215	12,820	9,805	12,040
Minnesota	154	70	68	121	170	180	17,209	11,900	12,240
Iowa	27	8	10	109	130	125	2,889	1,040	1,250
North Dakota	143	72	78	142	185	180	19,872	13,320	14,040
South Dakota	27	11	11	94	150	115	2,467	1,650	1,265
9 CENTRAL	718.2	320.5	321.5	128.2	182.4	183.6	85,940	58,450	59,035
Nebraska	62	31	31	176	190	245	10,518	5,890	7,595
Montana	15	10	10.5	159	215	245	2,337	2,150	2,572
Idaho	159	131	138	247	280	310	39,312	36,680	42,780
Wyoming	11.8	6.5	7.0	180	185	240	2,035	1,202	1,680
Colorado	73	48	52	246	255	385	17,627	12,240	20,020
New Mexico	3.0	1.2	.8	101	120	100	277	144	80
Utah	15.1	10.8	12.4	196	205	255	2,938	2,214	3,162
Nevada	2.4	1.4	1.7	214	260	310	504	364	527
Washington	34	28	26	294	390	410	9,905	10,920	10,660
Oregon	42	32	33	260	320	345	10,960	10,240	11,385
California	39	31	42	325	430	380	12,778	13,330	15,960
11 WESTERN	458.2	330.9	354.4	240.8	288.2	328.5	109,192	95,374	116,421
29 LATE STATES	1,732.0	965.5	1,036.0	194.9	259.9	271.1	323,128	250,925	280,863

POTATOES: ACREAGE HARVESTED, YIELD PER ACRE AND PRODUCTION IN THE UNITED STATES, CROP OF 1952 WITH COMPARISONS (Continued)

Group and State	Acres harvested			Yield per acre			Production		
	Average 1941-50	1951	1952	Average 1941-50	1951	1952	Average 1941-50	1951	1952
Thousand acres			Bushels			Thousand bushels			
INTERMEDIATE STATES:									
New Jersey	57	28	26	209	267	186	11,462	7,476 ²	4,836
Delaware	3.3	5.0	4.9	103	188	176	330	940	862
Maryland	15.4	8.2	6.4	120	150	122	1,762	1,230	781
Virginia	63	37	34	139	186	138	8,352	6,882	4,692
Kentucky	36	20	19	90	98	82	3,265	1,960	1,558
Missouri	28	14	12	111	112	90	3,022	1,568	1,080
Kansas	16.9	4.6	4.0	98	80	55	1,620	368	220
7 INTERMEDIATE STATES	218.8	116.8	106.3	142.1	174.9	132.0	29,814	20,424	14,029
36 LATE & INTERMEDIATE STATES	1,950.8	1,082.3	1,142.3	189.1	250.7	258.2	352,942	271,349	294,892
EARLY STATES:									
North Carolina	78	44	44	126	145	124	9,572	6,380	5,456
South Carolina	22	13	12	107	149	154	2,295	1,937	1,848
Georgia	18	7.0	6.0	70	69	76	1,217	483	456
Florida	29.1	24.5	31.0	155	258	246	4,398	6,321	7,626
Tennessee	36	19	17	86	81	80	3,005	1,539	1,360
Alabama	43	31	29	96	136	142	4,047	4,216	4,118
Mississippi	22	9	8	69	58	56	1,531	522	448
Arkansas	35	14	12	83	79	65	2,820	1,106	780
Louisiana	34.1	12.0	10.6	60	62	72	2,035	744	763
Oklahoma	20.0	6.5	5.0	71	81	80	1,359	526	400
Texas	46	19	17	97	116	120	4,402	2,204	2,040
Arizona	4.8	3.8	4.1	262	365	370	1,292	1,387	1,517
California ¹	63	49	60	368	445	430	23,610	21,805	25,800
13 EARLY STATES	450.3	251.8	255.7	142.8	195.3	205.8	61,583	49,170	52,612
TOTAL U. S. ..	2,401.0	1,334.1	1,398.0	180.4	240.3	248.6	414,525	320,519	347,504

¹ Early and late crops shown separately for California; combined for all other States.

² Includes 1,093,000 bushels of commercial early potatoes not marketed.

* Reprinted from Crop Production Annual Summary prepared by United States Department of Agriculture Bureau of Agricultural Economics Crop Reporting Board, Washington, D.C., Dec. 1952.

POTATO VARIATIONS

Add variety to the potato part of the meal by serving potatoes in different ways. If mashed potatoes are a family favorite, try stirring in small cubes of left-over ham, minced onion or other chopped vegetables. Combine the flavors of baked and mashed potatoes by serving baked stuffed potatoes. To do this, cut large baked potatoes in half lengthwise, scoop out the inside, mash and add fat, seasoning and milk. Stuff back into potato shells, brush top with melted fat and brown in a hot oven.

For an extra special dish, serve crisp and piping hot golden potatoes.

Golden Potatoes

4 medium-sized potatoes
3 tablespoons melted table fat
 $\frac{1}{3}$ cup crushed dry breakfast cereal
 $\frac{1}{2}$ teaspoon salt

Boil potatoes in jackets 20 to 30 minutes or until almost done, then peel. Coat each potato with melted fat and roll in cereal mixed with salt. Place on greased baking sheet and bake at 500 degrees about 30 minutes. This makes 4 servings.

RESEARCH PROJECTS AND PERSONS ENGAGED IN CONDUCTING RESEARCH ON IRISH POTATOES

Project	Special Emphasis	Research Worker	Location of Experiment Station or Laboratory
Potato Breeding and/or Variety Testing	Adaptability	C. H. Dearborn	Palmer, Alaska
		M. F. Babb	Palmer, Alaska
	Chipping quality	Arvo Kallio	Fairbanks, Alaska
	Scab resistance	Glen N. Davis	Davis, Calif.
	Variety testing	C. W. Frutchey	Fort Collins, Colo.
	Variety testing	Charles McAnelly	Fort Collins, Colo.
		Arthur Hawkins	Storrs, Conn.
	Variety trials	A. H. Eddins	Hastings, Fla.
	Blight resistance	J. E. Bailey	Experiment, Ga.
	Disease resistance	G. W. Woodbury	Moscow, Idaho
	Disease resistance	Walter Sparks	Moscow, Idaho
	Adaptation	N. K. Ellis	Lafayette, Ind.
	Adaptation	J. E. Larsen	Lafayette, Ind.
	Disease resistance	R. W. Samson	Lafayette, Ind.
		Allan Schark	Ames, Iowa
	Variety testing	Elmo W. Davis	Manhattan, Kan.
	Variety testing	James K. Greig, Jr.	Manhattan, Kan.
	Adaptation and disease resistance	Julian C. Miller	Baton Rouge, La.
		Raymon E. Webb	Baton Rouge, La.
	Bact. ring rot	Reiner Bonde	Orono, Maine
	Leafroll	Donald Folsom	Orono, Maine
	Variety testing	C. E. Cunningham	Orono, Maine
		Don Merriam	Presque Isle, Maine
	Adaptability	C. E. Cox	College Park, Md.
	Scab	J. H. Muncie	East Lansing, Mich.
	Scab	H. C. Moore	East Lansing, Mich.
	Scab	E. J. Wheeler	East Lansing, Mich.
	Scab	J. Tyson	East Lansing, Mich.
	Resistance to blight, scab and virus	F. A. Krantz	St. Paul 1, Minn.
		Fred A. Gowan	St. Paul 1, Minn.
		Carl J. Eide	St. Paul 1, Minn.
	Variety testing	C. H. Griffith	Grand Rapids, Minn.
	Variety testing	B. C. Beresford	Crockston, Minn.
	Variety testing	M. J. Thompson	Duluth, Minn.
	Graft hybrids	Florian Lauer	St. Paul, Minn.
	Insect resistance	Allan G. Peterson	St. Paul, Minn.
	Variety testing	W. S. Anderson	State College, Miss.
	Scab, variety testing	M. M. Afanasiev	Bozeman, Mont.
	Variety testing	H. N. Metcalf	Bozeman, Mont.
	Culinary quality	H. O. Werner	Lincoln, Nebr.
	Adaptation	Robert O'Keefe	Lincoln, Nebr.
	Adaptability	Paul T. Blood	Durham, N. H.
	Adaptability & quality	John C. Campbell	New Brunswick, N. J.
	Late blight	J. R. Livermore	Ithaca, N. Y.
	Late blight	J. C. Peterson	Ithaca, N. Y.
		Fred D. Cochran	Raleigh, N. C.
		Frank Haynes	Raleigh, N. C.
	Latent mosaic, scab	W. G. Hoyman USDA-ND	Fargo, N. D.
	Scab	J. H. Schultz	Fargo, N. D.
		R. L. Post	Fargo, N. D.
		R. L. Witz	Fargo, N. D.
		John Bushnell	Wooster, Ohio
		F. A. Romshe	Blair, Okla.
	Disease resistance	W. R. Mills	State College, Pa.
	Adaptability	J. Pastor Rodriguez	San Piedras, Puerto Rico
	Seed conservation	H. R. Cibes	San Piedras, Puerto Rico
	Variety trials	C. R. Skogley	Kingston, R. I.
	Variety testing	R. L. Foskett	Brookings, S. D.
		T. R. Gilmore	Crossville, Tenn.
	Variety testing	W. R. Cowley	Westvaco, Tex.
	Variety testing	P. W. Leeper	Westvaco, Tex.
	Variety testing	D. R. McAllister	Logan, Utah
	Disease resistance and adaptation	F. T. McLean	Norfolk, Va.
	Variety testing	M. M. Parker	Norfolk, Va.
	Variety testing	M. W. Carstens	Mt. Vernon, Wash.
		Seth B. Locke	Pullman, Wash.
		J. D. Menzies	Prosser, Wash.
		C. L. Vincent	Pullman, Wash.

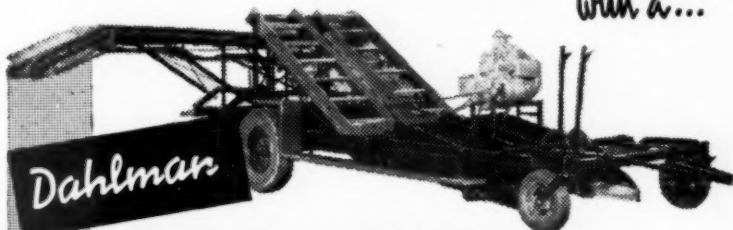
(Continued on page 62)



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RESEARCH PROJECTS AND PERSONS ENGAGED IN CONDUCTING RESEARCH ON IRISH POTATOES

Project	Special Emphasis	Research Worker	Location of Experiment Station or Laboratory
Potato Breeding and/or Variety Testing	Variety improvement	{ K. C. Westover M. E. Gallegly G. H. Rieman Wm. A. Riedl A. F. Vass W. C. Edmundson (USDA) R. W. Buck, Jr. (USDA)	Morgantown, W. Va. Morgantown, W. Va. Madison, Wis. Laramie, Wyo. Laramie, Wyo. Greeley, Colo. College Park, Md.
	Ring rot, scab resistance		
	Selection		
	Disease resistance		
	Cytogenetics		
	Leader National		
	Breeding Program	F. J. Stevenson (USDA)	Beltsville, Md.
	Leader Western Region	John G. McLean (USDA)	Aberdeen, Idaho
	Leader North Central Region		
	Leader Southern Region	C. E. Peterson (USDA)	Ames, Iowa
	Leader Northeast Region	T. P. Dykstra (USDA)	Baton Rouge, La.
	Leader, Potato Introductions	R. V. Akeley (USDA)	Presque Isle, Maine
Cultural Studies		R. W. Hougas (USDA)	Madison, Wis.
	Vine killing and weed control	C. H. Dearborn	Palmer, Alaska
	Vine killing	Arvo Kallio	Fairbanks, Alaska
	Vine killing	C. I. Branton	Palmer, Alaska
	Rotations	Robert Kunkel	Fort Collins, Colo.
	Rotations	B. A. Brown	Storrs, Conn.
	Improvement	Arthur Hawkins	Storrs, Conn.
		E. N. McCubbin	Hastings, Fla.
	General	J. L. Malcolm	Homestead, Fla.
	Hail injury	J. C. Noonan	Homestead, Fla.
	Hail injury	George W. Woodbury	Moscow, Idaho
	Yield and quality	Walter C. Sparks	Moscow, Idaho
	Quality	N. K. Ellis	Lafayette, Ind.
		J. E. Larsen	Lafayette, Ind.
		C. C. Singletery	Manhattan, Kan.
		F. B. Hadle	Manhattan, Kan.
		E. M. Emmert	Lexington, Ky.
	Cultivation	C. E. Cunningham	Orono, Maine
	Control of tuber size	K. F. Nielsen	Orono, Maine
		R. A. Struchtemeyer	Orono, Maine
	Planting rate and time	R. V. Akeley (USDA)	Presque Isle, Maine
	Effect on quality	H. C. Moore	East Lansing, Mich.
	Tillage and rotation	J. Tyson	East Lansing, Mich.
	Effect on quality	E. J. Wheeler	East Lansing, Mich.
	Chipping quality	S. T. Dexter	East Lansing, Mich.
	Hollow heart, tuber color	Robert E. Nylund	St. Paul 1, Minn.
	Cooking qualities	Isabel Noble	St. Paul 1, Minn.
	Nutritional values	Jane Leichenring	St. Paul 1, Minn.
	General	Victor N. Lambeth	Columbia, Mo.
	Dryland crop rotations	H. O. Werner	Lincoln 1, Neb.
	Water relations	Robert O'Keefe	Lincoln 1, Neb.
	Survey	George Stachwick	Lincoln 1, Neb.
	Dryland crop rotations	H. W. Chapman	Lincoln 1, Neb.
	Irrigation rotations	Lionel Harris	Scottsbluff, Neb.
	Vine killing	W. G. Hoyman	Fargo, N. D.
	Rotations	Ford S. Prince	Durham, N. H.
	Chipping quality	Paul T. Blood	Durham, N. H.
	Erosion control	Louis T. Kardos	Durham, N. H.
	Weed control	Richard Aldrich (USDA)	New Brunswick, N. J.
		{ John C. Campbell Gero Brill George Blake E. K. Alban Donald Comin H. D. Brown John Bushnell J. S. Cobb C. R. Skogley J. E. Sheehan M. M. Parker T. J. Nugent L. L. Danielson E. M. Dunton, Jr. L. T. Chandler K. C. Westover M. E. Marvel C. M. Rincker	New Brunswick, N. J. New Brunswick, N. J. New Brunswick, N. J. New Brunswick, N. J. Wooster, Ohio Wooster, Ohio Wooster, Ohio State College, Pa. Kingston, R. I. Kingston, R. I. Norfolk, Va. Norfolk, Va. Norfolk, Va. Norfolk, Va. Norfolk, Va. Morgantown, W. Va. Morgantown, W. Va. Laramie, Wyo.
	Crop rotations		
	Chemical weed control		
	Chipping quality		
	Effect on quality		
	Sod crop rotations		
	Hilling tests		
	Cultural methods		
	Weed control		
	Cultivation and rotation		
	General		
	Potato improvement		
Development and Revision of U. S. Grades & Standards	Potatoes (unprocessed)	R. L. Spangler (USDA)	Washington, D. C.
	Processed potato products	F. L. Southerland (USDA)	Washington, D. C.

RESEARCH PROJECTS AND PERSONS ENGAGED IN CONDUCTING RESEARCH ON IRISH POTATOES

Project	Special Emphasis	Research Worker	Location of Experiment Station or Laboratory
Disease Studies and Control	Ring rot, scab, viruses	D. M. Coe	Palmer, Alaska
	Scab and viruses	John W. Oswald	Davis, Calif.
	Scab	L. A. Schaal (USDA)	Ft. Collins, Colo.
	Verticillium wilt	G. S. Taylor	New Haven, Conn.
	Scab	J. G. Horsfall	New Haven, Conn.
		A. H. Eddins	Hastings, Fla.
		G. D. Ruehle	Homestead, Fla.
	General	James Guthrie	Aberdeen, Idaho
	Verticillium wilt	W. C. Sparks	Moscow, Idaho
	Verticillium wilt	J. G. McLean (USDA)	Moscow, Idaho
	Blight forecasting	R. W. Sampson	Lafayette, Ind.
	Ring rot, blight, viruses	Reiner Bonde	Orono, Maine
	Leafroll, wilts	Donald Folsom	Orono, Maine
	Virus dissemination	G. W. Simpson	Orono, Maine
	Virus diseases	E. S. Schultz (USDA)	Beltsville, Md.
	Blight	C. V. Kightlinger	Amherst, Mass.
	Scab	H. C. Moore	East Lansing, Mich.
	Scab	J. Tyson	East Lansing, Mich.
	Fusarium wilt, scab	J. H. Muncie	East Lansing, Mich.
	Fusarium wilt, scab	E. J. Wheeler	East Lansing, Mich.
	Fungicides	Carl J. Eide	St. Paul 1, Minn.
	Seed treatments, storage		
	rots	Donald Olmstead	St. Paul 1, Minn.
	Late blight, fungicides	H. D. Thurston	St. Paul 1, Minn.
	Blight, fungicides	John C. Campbell	New Brunswick, N. J.
		L. W. Nielsen	Raleigh, N. C.
	Fungicides, ring rot	W. G. Hoyman	Fargo, N. D.
	Ring rot	C. I. Nelson	Fargo, N. D.
	Ring rot	J. L. Parsons	Fargo, N. D.
	Fungicides, concentrated sprays		
		J. D. Wilson	Wooster, Ohio
	Virus diseases	John A. Milbraith	Corvallis, Ore.
	Fungicides	Roy A. Young	Corvallis, Ore.
		H. W. Thurston, Jr.	State College, Pa.
	Fungicides	R. E. Patterson	State College, Pa.
	General	F. L. Howard	Kingston, R. I.
	Virus transmission	Allyn Cook	Brookings, S. D.
	General	George Knowlton	Logan, Utah
	Seed treatment	R. S. Mullin	Norfolk, Va.
	Leafroll resistance	M. M. Parker	Norfolk, Va.
	Leafroll resistance	T. J. Nugent	Norfolk, Va.
	Virus	Seth B. Locke	Pullman, Wash.
	Virus	J. A. Menzies	Prosser, Wash.
	Virus	C. L. Vincent	Pullman, Wash.
	Fungicides	S. B. Locke	Pullman, Wash.
	Viruses	M. E. Gallegly	Morgantown, W. Va.
	Viruses	R. H. Larson	Madison, Wis.
	Viruses	H. J. Walters	Laramie, Wyo.
Economic Studies	Governmental programs	L. C. Martin (USDA)	Washington, D. C.
	Utilization	W. N. Garrett (USDA)	Washington, D. C.
	Governmental programs	Charles H. Merchant	Orono, Maine
	Farm management	W. E. Schrupf	Orono, Maine
	Regional project NCM-8, effect gov't program on potato industry	Willard W. Cochrane	St. Paul 1, Minn.
	Governmental programs	Roger W. Gray	St. Paul 1, Minn.
	Utilization	Vernon Sorenson	St. Paul 1, Minn.
Fertilizers and Soils		Richard A. King	Raleigh, N. C.
		R. H. Treadway (USDA)	Philadelphia, Pa.
	Rate and time of application of N.P.K.	L. M. Ware	Auburn, Ala.
		W. A. Johnson	Auburn, Ala.
		Otto Brown	Auburn, Ala.
		Arvo Kallio	Fairbanks, Alaska
	Quality	A. H. Mick	Palmer, Alaska
		C. H. Dearborn	Palmer, Alaska
		W. M. Laughlin	Palmer, Alaska
		Oscar A. Lorenz	Davis, Calif.
	Effect on yield and quality	J. C. Bishop	Davis, Calif.
		M. P. Zobel	Davis, Calif.
		H. B. Hoyle	Davis, Calif.
	Rate, ratio, rotations	Robert Kunkel	Ft. Collins, Colo.
		B. A. Brown	Storrs, Conn.
		Arthur Hawkins	Storrs, Conn.
	Urea and sugar	E. M. Emmert	Lexington, Ky.
	Fertilizer tests	C. E. Cunningham	Orono, Maine
	Soil management	Roland A. Struchtemeyer	Orono, Maine
	Phosphorus	G.V.C. Houghland (USDA)	Beltsville, Md.

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RESEARCH PROJECTS AND PERSONS ENGAGED IN CONDUCTING RESEARCH ON IRISH POTATOES

Project	Special Emphasis	Research Worker	Location of Experiment Station or Laboratory
Fertilizers and soils	Formula and analysis	J. H. Axley	College Park, Md.
	Ratios	J. Tyson	East Lansing, Mich.
		F. M. Harrington	Bozeman, Mont.
	Effect on chips	Ford S. Prince	Durham, N. H.
		Paul T. Blood	Durham, N. H.
		Louis T. Kardos	Durham, N. H.
	Ratios, rates, placement	John C. Campbell	New Brunswick, N. J.
		Moyle Howard	Raleigh, N. C.
	Response to zinc and boron	E. B. Norum	Fargo, N. D.
		W. G. Hoyman	Fargo, N. D.
		C. O. Clogett	Fargo, N. D.
	Effect of N.P.K. on yield	E. B. Norum	Fargo, N. D.
		R. A. Young	Fargo, N. D.
	Fertilizers	John Bushnell	Wooster, Ohio
Harvesting and Handling		M. J. Johnson	Redmond, Ore.
	Rate and time of application	F. G. Merkle	State College, Pa.
	Phosphate sources	T. E. Odland	Kingston, R. I.
	Economical fertilization	D. A. Schallock	Kingston, R. I.
	Cover crops + time and rate of fertilization, lime source	E. M. Dunton, Jr.	Norfolk, Va.
	Methods of grading	Robert Kunkel	Ft. Collins, Colo.
	Skinning prevention	C. B. Hall	Gainesville, Fla.
	Effect on storage quality	Walter C. Sparks	Moscow, Idaho
		G. W. Woodbury	Moscow, Idaho
	Equipment improvement	H. D. Bartlett	Orono, Maine
		R. O. Martin	Orono, Maine
		F. W. Peikert	Orono, Maine
	General Physiology	A. H. Graves (USDA)	East Grand Forks, Minn.
		R. E. Nylund	St. Paul 1, Minn.
Insect Control and Related Factors	Physiology	Herbert Findlen (USDA)	E. Grand Forks, Minn.
		L. J. Kushman (USDA)	Meridian, Miss.
		C. L. McCombs	Raleigh, N. C.
	Development of equipment to measure bruising	Perry Hemphill	Fargo, N. D.
		J. H. Schultz	Fargo, N. D.
		R. L. Witz	Fargo, N. D.
	Harvesting costs	H. W. Herbison (USDA)	Fargo, N. D.
	Harvesting costs	W. N. Garrott (USDA)	Washington, D. C.
	Harvesting costs	R. E. L. Greene (USDA)	Gainesville, Fla.
	Reducing damage	R. E. L. Greene (USDA)	Gainesville, Fla.
	Packaging	Robert Hardenburg (USDA)	Beltsville, Md.
	Packaging	L. J. Kushman (USDA)	Meridian, Miss.
	Packaging	J. M. Lutz (USDA)	New York, N. Y.
	Reducing damage	G. B. Davis (USDA)	Corvallis, Ore.
Wireworms	Reducing damage	B. J. Todd (USDA)	Clemson, S. C.
	Reducing damage	J. M. Johnson (USDA)	Blackburg, Va.
	Wireworms	R. H. Washburn	Palmer, Alaska
	Wireworms	T. M. Dobrovsky	Hastings, Fla.
	Leafroll vectors	Arthur Walz	Parma, Idaho
	Aphids-leafroll	W. A. Shands (USDA)	Orono, Maine
	Aphids-leafroll	G. W. Simpson	Orono, Maine
	Wireworms	J. H. Hawkins	Orono, Maine
	Transmission of purple top	Allan G. Peterson	St. Paul 1, Minn.
		Roscoe E. Hill	Lincoln, Nebr.
	Flea beetles-soil insecticides	Robert Staples	Lincoln, Nebr.
		Lloyd Anderson	Lincoln, Nebr.
	Potato psyllid	R. W. Wallis (USDA)	Scottsbluff, Nebr.
	Insecticides	John C. Campbell	New Brunswick, N. J.
Wireworms	Insecticides	J. P. Reed	New Brunswick, N. J.
	Insecticides	B. B. Pepper	New Brunswick, N. J.
	Insecticides-rates methods	W. J. Promersberger	Fargo, N. D.
		R. L. Post	Fargo, N. D.
		M. G. Rostberg	Fargo, N. D.
	Varietal resistance	J. P. Sleesman	Wooster, Ohio
	Life history and control	Clark Amen	Corvallis, Oregon
	Insecticides	H. H. Crowell	Corvallis, Oregon
	Soil insects	H. E. Morrison	Corvallis, Oregon
	Wireworms	W. J. Reid, Jr. (USDA)	Charleston, S. C.
	Survey and biology	George F. Knowlton	Logan, Utah
	Wireworm control	D. E. Greenwood	Norfolk, Va.
	Wireworms	M. C. Lane, (USDA)	Walla Walla, Wash.
	Aphids, whiteflies	B. J. Land's (USDA)	Union Gap, Wash.

RESEARCH PROJECTS AND PERSONS ENGAGED IN CONDUCTING RESEARCH ON IRISH POTATOES

Project	Special Emphasis	Research Worker	Location of Experiment Station or Laboratory
Irrigation	Fertilizer in irrigation	{O. A. Lorenz	Davis, Calif.
	Transit	{L. D. Doreen	Davis, Calif.
	General	W. R. Barger	Davis, Calif.
	General	W. C. Edmundson (USDA)	Greeley, Colo.
		Gilbert Cory	Aberdeen, Idaho
	Rotations	Orlando Howe	Scottsbluff, Nebr.
		L. C. Harris	Scottsbluff, Nebr.
	Effect on food value and chipping quality	Harold Rhoades	Scottsbluff, Nebr.
		John Bushnell	Wooster, Ohio
		H. D. Brown	Wooster, Ohio
	Effect on yield and quality	F. A. Romshe	Blair, Okla.
		John C. Campbell	New Brunswick, N. J.
		D. A. Schallock	Kingston, R. I.
		R. S. Bell	Kingston, R. I.
	General	T. E. Odland	Kingston, R. I.
Manufacture of Industrial and Food Products	Dehydration equipment	{E. Lowe	{Western Regional
		{A. H. Brown	{Research Laboratory
			{U.S.D.A., Albany, Calif.
	Storage of dehydrated potatoes	{H. K. Burr	{Western Regional
			{Research Laboratory
			{U.S.D.A., Albany, Calif.
	Potato granules and dices	{H. K. Burr	{Western Regional
		{F. E. Lindquist	{Research Laboratory
			{U.S.D.A., Albany, Calif.
		{R. H. Treadway	{Eastern Regional
			{Research Laboratory
			{U.S.D.A., Phila., Pa.
	Basic research relative to browning and changes in starch properties	{H. K. Burr	{Western Regional
		{F. E. Lindquist	{Research Laboratory
			{U.S.D.A., Albany, Calif.
		{E. Yanovsky	{Eastern Regional
		{R. H. Treadway	{Research Laboratory
			{U.S.D.A., Phila., Pa.
	Potato chips	R. H. Treadway	{Eastern Regional
			{Research Laboratory
			{U.S.D.A., Phila., Pa.
	Starch derivatives	E. Yanovsky	{Eastern Regional
			{Research Laboratory
			{U.S.D.A., Phila., Pa.
Marketing and Related Factors		H. A. Johnson	Palmer, Alaska
		{R. V. Enochian (USDA)	{Berkeley, Calif.
		{L. C. Martin (USDA)	{Washington, D. C.
	Retail margins	R. E. L. Greene	Gainesville, Fla.
	Spoilage and waxing	G. B. Ramsey (USDA)	Chicago, Ill.
	Market diseases	C. H. Merchant	Orono, Maine
	Consumer acceptance	A. L. Perry	Orono, Maine
		W. E. Schruppf	Orono, Maine
	Support prices	R. A. Fitzpatrick	Amherst, Mass.
		H. C. Moore	East Lansing, Mich.
		E. J. Wheeler	East Lansing, Mich.
	Consumer acceptance	F. A. Krantz	St. Paul 1, Minn.
		Clarence Miller	Lincoln 1, Nebr.
	Support prices	Perry Hemphill	Fargo, N. D.
	Market diseases	J. M. Lutz (USDA)	New York, N. Y.
	Effect of respiration etc. on marketability	E. K. Alban	Wooster, Ohio
	Spoilage	J. M. Johnson	Blacksburg, Va.
Nutritional Value and Related Studies	Culinary quality	{A. H. Mick	{Palmer, Alaska
		{M. F. Babb	{Palmer, Alaska
		{W. M. Laughlin	{Palmer, Alaska
	Palatability	Mary Greenwood	Storrs, Conn.
	Palatability	Arthur Hawkins	Storrs, Conn.
	Family food consumption	F. Clark (USDA)	Washington, D.C.
	Food composition	B. K. Watt (USDA)	Washington, D.C.
	Ascorbic acid	C. Schuck (USDA)	Lafayette, Ind.
	Dairy feed	H. C. Dickey	Orono, Maine
	Poultry feed	J. Robert Smyth	Orono, Maine
	Culinary quality	M. E. Kirkpatrick (USDA)	Beltsville, Md.
	Precooked home-frozen foods	E. H. Dawson (USDA)	Beltsville, Md.

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RESEARCH PROJECTS AND PERSONS ENGAGED IN CONDUCTING RESEARCH ON IRISH POTATOES

Project	Special Emphasis	Research Worker	Location of Experiment Station or Laboratory
Nutritional Value and Related Studies	Amino acids	M. J. Horn (USDA)	Beltsville, Md.
	Folic acid	E. W. Toepfer (USDA)	Beltsville, Md.
	Food energy	M. Adams (USDA)	Beltsville, Md.
	Potato dextrin and Utilization	M. Womack (USDA)	Beltsville, Md.
	Experimental diet	M. L. Hathaway (USDA)	Beltsville, Md.
		F. L. Meyer (USDA)	Beltsville, Md.
	Culinary quality	H. C. Moore	East Lansing, Mich.
		E. J. Wheeler	East Lansing, Mich.
	Cooking quality and nutritive value	P. Paul	East Lansing, Mich.
		K. Gaffner	East Lansing, Mich.
		M. E. Cravens	East Lansing, Mich.
		L. V. Nelson	East Lansing, Mich.
	Culinary quality	R. V. Nylund	St. Paul 1, Minn.
	Cooking quality	Isabel Nobel	St. Paul 1, Minn.
		Jane Leichsenring	St. Paul 1, Minn.
Physiological studies	Livestock food	A. L. Harvey	St. Paul 1, Minn.
		T. M. McCall	St. Paul 1, Minn.
		H. O. Fausch	St. Paul 1, Minn.
		H. O. Werner	St. Paul 1, Minn.
	Ascorbic acid	Ruth Leverton	Lincoln, Nebr.
	Culinary quality	E. E. Hester (USDA)	Lincoln, Nebr.
	Culinary quality	L. R. Richardson (USDA)	State College, Pa.
	Folic Acid		College Station, Texas
	Factors affecting quality	Robert E. Nylund	St. Paul 1, Minn.
	Metabolism	H. W. Chapman	Lincoln, Nebr.
Storage and Related Factors	Metabolism	H. O. Werner	Lincoln, Nebr.
	Wound healing	Joan M. Wallace	Lincoln, Nebr.
	Ventilation	M. F. Babb	Palmer, Alaska
	Ventilation	Leonard L. Morris	Davis, Calif.
		W. A. Junnila	Storrs, Conn.
		Arthur Hawkins	Storrs, Conn.
		W. V. Hukill	Ames, Iowa
		Raymon E. Webb	Baton Rouge, La.
	Handling equipment	H. D. Bartlett	Orono, Maine
	Handling equipment	R. O. Martin	Orono, Maine
	Handling equipment	F. W. Peikert	Orono, Maine
	Cooking quality	P. H. Heinze (USDA)	Beltsville, Md.
	Potato chips	R. C. Wright (USDA)	Beltsville, Md.
	Physiology	W. T. Pentzer (USDA)	Beltsville, Md.
		E. J. Wheeler	East Lansing, Mich.
Transportation	Equipment	Robert E. Nylund	St. Paul 1, Minn.
	Handling equipment	John Strait	St. Paul 1, Minn.
	Keeping quality	A. D. Edgar (USDA)	East Grand Forks, Minn.
	Seed	Victor Lambeth	Columbia, Mo.
	Quality	H. O. Werner	Lincoln, Nebr.
		L. W. Bonnicksen	Corvallis, Oregon
	Physiology and equipment	A. L. Ryall (USDA)	Fresno, Calif.
		Walter Redit (USDA)	Beltsville, Md.
		L. J. Kushman (USDA)	Meridian, Miss.
		J. M. Lutz (USDA)	New York, N. Y.

SULFUR FOR POTATO LAND

Sulfur can return scab-infested potato land to high production within two years, if a heavy application is used, according to John W. Oswald, plant pathologist of the California Experiment Station.

Crop rotation (preferably

with cotton) is recommended for the first year. Experiments showed that a heavy application of sulfur, then a planting of cotton, followed by potatoes, produced 80 to 90 per cent marketable crop compared to 10 to 20 per cent marketable yield on non-sulfured plot.

WORLD POTATO PRODUCTION IN 1952-1953 SAME AS PREVIOUS SEASON BUT SPOTTY¹

Potato production in 70 countries, including all the important potato producing areas in the world, is estimated at about 8 billion bushels in 1952-53. This is only slightly larger than the production in 1951-52 for the same 70 countries, but 4 percent below the prewar average production of 8.4 billion bushels.

The 1952-1953 estimate includes preliminary figures for countries in the Southern Hemisphere where part of the 1953 harvest is yet uncompleted, particularly of some of the late crop varieties.

The nearly equal production estimated for the 2 recent years does not mean that production conditions in the 2 seasons were alike. They were markedly different in several areas. Growing conditions in the northernmost areas of both North America and Europe were unusually favorable to potatoes. The season in the southern parts of the Northern Hemisphere was unfavorable and in areas between they were spotted.

Yields Up In Northern Countries

In Canada for example the 1952 yield per acre was 18 per cent higher than the year previous, in Norway it was 19 per cent higher, Finland 16 per cent, Denmark 14 per cent and in the Netherlands and Belgium almost 10 per cent higher. In the United States and Sweden yields were only 2 to 4 per cent above the previous year. In the more southern areas of France, Portugal, Yugoslavia and Italy the 1952 yields were down. In France they were 7 per cent below 1951, Italy 6 per cent, Portugal 20 per cent and Yugoslavia 31 per cent.

In the middle areas, Germany for example, average 1952 yields were 4 per cent below 1951. But in southern Germany yields were 10 to 18 per cent below. The season was unfavorable also in the lower elevation of Austria but for the country as a whole the 1952 yield was almost as high as in 1951. From this and other information it appears that the 1952 potato season was unfavorable in most of Europe south of the middle of Germany. There was one exception reported. This was in Switzerland where the 1952 yield was 13 per cent above 1951. The most favored spots were Scandinavia and Canada. Further to the east in Greece, Turkey, and Israel, yields were favorable in 1952. The least favorable was southern Europe and North Africa.

It is too early for definite conclusion regarding the Southern Hemisphere. But general conditions are known to have been good in Argentina, Chile and New Zealand. Favorable potato crops can be expected from most of these countries. But their production is very minor. Only 2 per cent of the total world production is grown in Africa and South America. About 5 per cent is grown in North America where Canada and the United States are the only major producers, 33 per cent in Western Europe and 20 per cent behind the Iron Curtain countries. Estimates for Iron Curtain countries are based on fragmentary information.—By Orval E. Goodsell, based in part upon U. S. Foreign Service reports.

¹ Published in Foreign Crops and Markets May 4, 1953

POTATOES: Acreage, yield and production in specified countries Averages 1945-49, Annual 1951-52

Continent and country	Average 1945-49	Acreage		Yield per acre			Production		
		1951	1952 ¹	Average 1945-49	1951	1952 ¹	Average 1945-49	1951	1952 ¹
	1,000 acres	1,000 acres	1,000 acres	Bu.	Bu.	Bu.	1,000 bushels	1,000 bushels	1,000 bushels
North America									
Canada	373	235	294	175	170	201	65,300	48,355	58,957
El Salvador	1	2	2	35	50	50	41	100	100
Guatemala	10	10	10	48	47	48	483	470	475
Honduras	4	4	4	35	38	38	133	150	150
Mexico	69	75	75	68	64	64	4,693	4,777	4,777
Panama, Republic of	1	1	1	74	70	37	74	70	37
United States	2,284	1,334	1,398	189	240	249	431,641	320,515	347,504
Bermuda	1	1	1	55	41	50	55	41	50
Cuba	24	25	25	125	152	152	3,009	3,804	3,800
Dominican Republic	4	3	3	30	20	26	69	60	77
Jamaica	3	3	3	30	27	25	33	80	75
Total	2,774	1,743	1,816	182	217	229	505,531	378,422	416,062

POTATOES: Acreage, yield and production in specified countries
Averages 1945-49, Annual 1951-52 (continued)

Continent and country	Acreage			Yield per acre			Production		
	Average 1945-49	1951	1952 ¹	Average 1945-49	1951	1952 ¹	Average 1945-49	1951	1952 ¹
Europe									
Austria	423	469	469	168	204	201	71,135	95,532	94,430
Belgium	233	242	234	287	325	355	66,803	78,680	83,000
Denmark	277	260	267	264	283	323	73,312	73,599	86,310
Finland	211	235	237	205	216	250	43,305	50,853	59,359
France	2,863	2,708	2,590	161	182	169	460,217	493,826	437,797
Germany	2,660	2,858	2,834	237	321	309	631,000	916,746	876,478
Greece	75	94	98	140	162	170	10,487	15,253	16,704
Iceland	2	2	2	136	180	180	273	360	360
Ireland	379	321	308	291	322	301	110,348	103,256	92,631
Italy	982	955	968	90	109	103	88,460	104,357	99,232
Malta	8	7	7	75	64	64	617	450	450
Netherlands	474	384	397	340	363	397	161,097	139,463	157,445
Norway	152	145	143	280	257	305	42,537	37,294	43,614
Portugal	195	230	213	170	222	177	33,180	51,086	37,661
Spain	893	914	914	112	161	151	99,743	146,973	137,787
Sweden	353	323	337	195	200	203	68,742	64,534	68,416
Switzerland	173	140	141	252	276	313	43,521	38,580	44,092
United Kingdom	1,492	1,050	990	259	295	296	362,551	309,269	292,992
Yugoslavia	650	558	567	77	108	74	50,000	60,373	41,740
Total above	12,405	11,895	11,716	195	234	228	2,417,328	2,780,484	2,670,498
Other Europe ³	9,807	11,229	11,173	165	159	144	1,616,034	1,783,150	1,608,125
Total Europe	22,212	23,124	22,889	182	195	182	4,033,362	4,563,634	4,278,623
U.S.S.R. (Europe & Asia)	22,131	23,400	23,400	125	111	124	2,770,500	2,600,000	2,900,000
ASIA									
Cyprus	10	13	12	135	140	125	1,350	1,817	1,500
Israel ⁴	2	5	9	58	182	201	1,212	992	1,839
Lebanon	11	7	9	121	124	124	1,335	919	1,102
Syria	8	10	10	83	55	74	689	551	735
Turkey	151	211	210	79	117	119	11,897	24,618	25,000
India	542	618	600	97	103	100	52,733	63,504	60,000
Indonesia	14	18	18	50	56	56	698	1,000	1,000
Japan	531	488	488	141	193	189	74,930	94,401	92,403
North Korea	237	260	260	74	62	62	17,559	16,000	16,000
South Korea	120	115	95	85	78	95	10,240	8,971	9,000
Philippine Islands	1	1	1	70	70	70	8	8	8
Total	1,627	1,746	1,712	106	122	122	172,651	212,781	208,587
South America									
Argentina	432	385	400	86	93	100	36,978	35,825	40,000
Bolivia	150	170	175	53	58	57	8,000	9,921	10,000
Brazil	325	380	370	71	70	70	23,202	26,505	26,000
Chile	131	124	125	152	145	144	19,910	17,994	18,000
Colombia	242	250	250	71	79	72	17,222	18,000	18,000
Ecuador	62	60	60	45	50	50	2,806	3,000	3,000
Peru	450	482	485	81	82	82	36,601	39,609	40,000
Uruguay	22	27	25	56	68	60	1,239	1,837	1,500
Venezuela	15	12	12	37	92	83	551	1,100	1,000
Total	1,829	1,890	1,902	80	81	83	146,509	153,791	157,500
Africa									
Algeria	45	54	55	126	170	164	5,690	9,186	9,000
Belgian Congo	3	7	7	125	89	86	358	611	600
Egypt	33	26	25	198	247	244	6,540	6,423	6,099
Eritrea	2	2	2	40	40	40	88	75	80
Madagascar	53	47	45	46	67	20	2,416	3,164	909
Mauritius	1	1	1	81	130	125	81	130	125
Mozambique	5	1	1	75	75	75	118	120	120
Nigeria and Cameroons ..	2	1	1	37	40	40	29	40	40
Southern Rhodesia	5	4	4	87	100	100	437	400	400
Tunisia	5	5	5	134	120	120	681	600	600
Union of South Africa ..	151	140	140	67	64	64	10,143	9,023	9,000
Total	305	288	286	87	103	94	26,581	29,772	26,973
Oceania									
Australia	144	125	125	136	112	120	19,577	14,000	15,000
New Zealand	20	13	16	232	172	222	4,634	2,240	3,547
Total	164	138	141	148	118	132	24,211	16,240	18,547
World Total	51,042	52,329	52,146	150	152	154	7,679,345	7,954,640	8,006,232

¹ Preliminary. ² Not comparable with later years as prewar years apparently include small farms and gardens. ³ Includes Albania, Bulgaria, Czechoslovakia, Germany (Eastern Zone), Hungary, Poland and Rumania. ⁴ Jewish farming only.
 Foreign Agricultural Service. Prepared or estimated on the basis of official statistics of foreign governments, reports of U. S. Foreign Service officers, results of office research and other information. Years shown refer to year of harvest in the Northern Hemisphere and includes the harvest immediately following in the Southern Hemisphere. Averages are for years stated or for the nearest comparable period. The yields per acre for countries having a small production were calculated on the basis of unrounded estimates of acreage.

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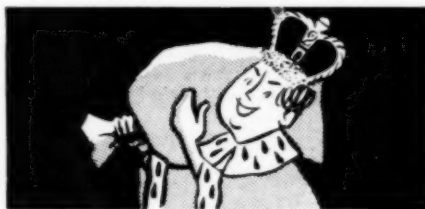
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RANKING AGRICULTURAL COUNTIES

IRISH POTATOES HARVESTED FOR HOME USE OR FOR SALE—100 LEADING COUNTIES IN ACREAGE WITH QUANTITY HARVESTED, 1949, AND WITH COMPARISONS, 1944

County	Acres		Rank		Quantity harvested Bushels		Rank	
	1949	Number	1944	Rank	1949	1944	1949	Rank
United States	1,514,097	2,536,715	—	—	366,527,787	356,547,428	—	—
100 counties	921,555	1,193,981	—	—	264,938,785	230,502,238	—	—
Aroostook, Maine	127,129	163,560	1	1	60,311,788	47,416,804	1	1
Kern, California	54,820	55,774	2	2	22,698,282	18,957,668	2	2
Suffolk, New York	39,179	51,988	3	3	9,084,782	8,763,556	3	3
Walsh, North Dakota	32,944	51,760	4	4	6,269,982	6,204,900	6	5
Bingham, Idaho	29,794	29,227	5	8	7,218,513	6,619,267	4	4
Pembina, North Dakota	22,848	33,906	6	6	4,131,084	4,524,297	10	12
Grand Forks, North Dakota	22,764	37,183	7	5	4,788,793	4,899,910	8	10
Bonneville, Idaho	22,225	25,300	8	9	5,131,563	5,256,003	7	9
Polk, Minnesota	20,797	33,571	9	7	3,984,368	4,008,795	12	14
Rio Grande, Colorado	18,408	22,340	10	12	6,705,847	5,941,520	5	6
Scotts Bluff, Nebraska	16,175	20,603	11	13	4,287,866	4,693,510	9	11
Clay, Minnesota	14,285	15,184	12	18	2,207,621	1,161,995	28	43
Weld, Colorado	13,790	22,911	13	10	3,980,137	5,292,485	13	8
Jefferson, Idaho	13,461	14,516	14	22	2,819,780	2,897,318	21	17
Steuben, New York	12,949	17,330	15	15	4,086,898	3,091,256	11	15
Lehigh, Pa.	12,235	14,603	16	20	3,154,451	1,997,898	18	28
Fremont, Idaho	12,019	13,156	17	25	2,386,617	2,792,918	25	18
Accomack, Virginia	11,974	13,513	18	23	2,377,840	1,250,966	26	40
Monmouth, New Jersey	11,913	22,609	19	11	2,216,704	2,903,062	27	16
Twin Falls, Idaho	11,891	12,980	20	27	3,803,625	4,380,288	15	13
Klamath, Oregon	11,752	16,284	21	16	3,846,038	5,518,183	14	7
Cameron, Texas	11,465	6,747	22	51	970,005	583,657	68	93
Madison, Idaho	10,453	10,964	23	30	2,118,260	2,392,943	29	23
Tulare, California	9,601	2,580	24	(2)	3,079,597	601,282	10	91
Baldwin, Alabama	9,450	19,616	25	14	1,154,238	1,067,376	59	47
Malheur, Oregon	9,147	8,859	26	36	2,629,505	2,198,940	23	24
Northampton, Virginia	9,023	13,050	27	26	1,930,353	1,212,448	32	41
Portage, Wisconsin	8,962	14,554	28	21	1,382,286	1,828,742	49	38
Middlesex, New Jersey	8,806	14,648	29	19	1,736,735	1,708,183	37	33
Bay, Michigan	8,498	9,132	30	35	1,150,574	683,602	60	82
Yakima, Washington	8,213	8,322	31	37	3,337,108	2,306,000	16	22

(Continued on Page 72)

RANKING AGRICULTURAL COUNTIES¹

County	Acres		Rank		Quantity Harvested Bushels		Rank	
	1949	Number	1949	1944	1949	1944	1949	1944
Mercer, New Jersey	7,878	15,324	32	17	1,569,799	2,052,568	42	25
Penobscot, Maine	7,759	11,322	33	29	3,024,496	1,893,297	29	29
Langlade, Wisconsin	7,703	7,338	34	44	2,793,894	1,211,016	22	42
Cassia, Idaho	7,546	19,682	35	32	2,080,892	2,433,743	31	21
Montcalm, Michigan	7,075	10,691	36	31	1,575,162	1,673,173	41	35
Lancaster, Pennsylvania	7,032	11,340	37	28	1,756,915	1,854,600	35	31
Jerome, Idaho	6,889	8,212	38	38	2,096,737	2,661,927	30	19
San Joaquin, California	6,783	8,018	39	39	3,171,080	2,589,502	17	20
Riverside, California	6,663	4,515	40	86	2,403,937	1,585,913	24	37
Dade, Florida	6,567	1,848	41	(2)	1,833,375	294,047	39	(2)
Marshall, Minnesota	5,876	19,285	42	33	1,169,969	1,020,633	57	50
Nassau, New York	5,665	13,332	43	24	1,035,018	2,017,400	62	27
St. Johns, Florida	5,599	7,330	44	45	1,260,760	795,478	52	70
Clark, South Dakota	5,570	6,010	45	59	579,061	787,372	99	71
Presque Isle, Michigan	5,511	6,510	46	55	972,527	1,061,007	67	48
Traill, North Dakota	5,421	8,015	47	50	954,711	883,730	79	62
Freeborn, Minnesota	5,350	5,325	48	67	1,667,054	846,967	38	66
Canyon, Idaho	5,019	6,698	49	52	1,783,398	2,020,045	33	26
Erie, Pennsylvania	4,924	6,876	50	48	1,457,394	1,134,017	47	44
Northampton, Pennsylvania	4,812	6,865	51	49	1,392,206	1,097,842	48	45
York, Pennsylvania	4,554	7,553	52	43	1,082,330	928,913	61	58
Minidoka, Idaho	4,507	6,632	53	53	1,179,733	1,887,118	56	30
Modoc, California	4,335	2,761	54	(2)	1,492,205	1,015,708	46	51
Schuykill, Pennsylvania	4,226	6,252	55	58	914,850	731,097	71	77
Saguache, Colorado	4,135	5,836	56	61	1,165,245	905,940	58	60
Crook, Oregon	4,125	3,452	57	(2)	1,608,898	726,275	47	79
Benton, Washington	4,085	1,031	58	(2)	1,760,525	1,254,665	34	(2)
Hartford, Connecticut	4,078	7,961	59	41	1,009,375	1,846,273	65	36
Wyoming, New York	4,052	5,043	60	75	1,347,373	1,097,312	50	46
Charleston, South Carolina	3,962	6,485	61	56	737,943	305,886	84	(2)
Grant, Washington	3,928	2,345	62	(2)	1,748,315	757,750	36	75
Norman, Minnesota	3,857	5,941	63	69	625,857	368,612	92	(2)
Oncida, Wisconsin	3,856	4,439	64	88	1,186,350	513,015	65	(2)
Concejos, Colorado	3,817	3,967	65	97	1,560,043	870,661	43	63
Monroe, New York	3,781	6,617	66	54	1,015,549	936,430	63	56
Deschutes, Oregon	3,746	3,813	67	(2)	981,662	726,915	66	78
Burlington, New Jersey	3,703	4,699	68	84	678,416	672,890	87	83
Erie, New York	3,700	7,164	69	46	819,087	844,023	76	68

RANKING: AGRICULTURAL COUNTIES¹

County	Acres		Rank		Quantity Harvested Bushels		Rank	
	1949 ²	Number	1944	1949	1944	1949	1944	1949
San Bernardino, California	3,693		1,519	70	(2)	1,502,995	371,787	45
Kittson, Minnesota	3,660		10,160	71	34	707,988	1,003,508	85
Kittitas, Washington	3,638		5,183	72	69	1,530,143	1,824,688	44
Houghton, Michigan	3,626		4,993	73	77	853,010	746,098	74
Genesee, New York	3,496		4,881	74	80	913,522	913,522	69
Marathon, Wisconsin	3,478		6,838	75	50	482,804	489,301	(2)
Alamogosa, Colorado	3,477		4,066	76	94	1,187,783	783,219	54
Worcester, Maryland	3,476		3,558	77	(2)	611,678	369,442	95
Box Butte, Nebraska	3,449		5,489	78	65	676,415	587,015	88
Hennepin, Minnesota	3,386		5,581	79	64	606,579	492,777	96
Livingston, New York	3,377		4,298	80	91	1,199,649	862,609	53
Potter, Pennsylvania	3,341		5,089	81	74	1,011,583	1,007,353	64
Beaufort, North Carolina	3,249		4,810	82	82	567,966	534,628	(2)
Somerset, Pennsylvania	3,227		7,058	83	47	908,391	1,297,233	72
Santa Barbara, California	3,162		2,029	84	(2)	1,261,593	757,922	51
Wayne, New York	3,090		3,428	85	(2)	799,403	622,803	79
Wayne, North Carolina	2,979		2,272	86	(2)	373,337	165,798	(2)
Bannock, Idaho	2,967		4,130	87	93	598,532	965,352	97
Camden, North Carolina	2,945		4,174	88	92	578,629	381,583	109
Hampshire, Massachusetts	2,906		4,896	89	79	768,859	893,383	81
Morrill, Nebraska	2,887		3,375	90	(2)	817,815	609,506	77
Gooding, Idaho	2,784		3,532	91	(2)	764,152	845,235	82
Onondaga, New York	2,780		6,388	92	57	741,230	931,958	83
Pasquotank, North Carolina	2,766		3,561	93	(2)	563,002	464,937	(2)
Washington, Rhode Island	2,754		3,088	94	(2)	796,697	693,374	80
Columbia, Pennsylvania	2,730		3,575	95	(2)	671,124	551,926	90
Siskiyou, California	2,720		5,403	96	66	904,420	1,676,240	73
Deaf Smith, Texas	2,704		2,769	97	(2)	386,878	450,637	(2)
Berks, Pennsylvania	2,628		5,636	98	63	491,159	581,826	(2)
Cambrin, Pennsylvania	2,581		5,141	99	70	536,529	669,647	(2)
Maricopa, Arizona	2,560		1,864	100	(2)	810,273	424,699	78

¹ Does not include acres for farms with less than 15 bushels harvested.² Not one of the first 100 counties.¹ From U. S. Bureau of Census, U. S. Census of Agriculture: 1950 Vol. 5, Special Reports, Part 3, Ranking Agricultural Counties, U. S. Government Printing Office, Washington 25, D.C.

BUYER'S GUIDE

The firms listed below have materials or supplies of interest to those in the Potato Industry.

(Names set in **BLACK TYPE** indicate that the company has an advertisement on another page.)

AIR CONDITIONING UNITS (For Potato Storage)

Aeroglide Corporation, 510 Glenwood Ave., Raleigh, N. C.

AUTOMATIC BAGGER JIGGERS

Paramount Mfg. Co., 1615 East Main St., Stockton, Calif.

BAG CLOSERS

Aeroglide Corporation, 510 Glenwood Ave., Raleigh, N. C.

BAG LOADERS

Boggs Mfg. Co., Atlanta, N. Y.

Paramount Manufacturing Co., 1615 East Main St., Stockton, Calif.

Singer Mfg. Co., Smithville, Ohio.

BAGGING MACHINE

Aeroglide Corporation, 510 Glenwood Ave., Raleigh, N. C.

Lockwood Graders, Gering, Neb. and Grand Forks, N. Dak.

Paramount Manufacturing Co., 1615 East Main St., Stockton, Calif.

BAGS (Burlap)

American Bag and Burlap Co., 32 Arlington St., Chelsea 50, Mass.

Max Katz Bag Co., 312-16 So. New Jersey St., Indianapolis 4, Ind.

Maine Potato Growers, Presque Isle, Maine

Seaman Bag Company, 2512 S. Damen Ave., Chicago 8, Ill.

BAGS (Paper)

Equitable Paper Bag Co., 45-50 Van Dam St., Long Island City 1, N. Y.

Max Katz Bag Co., 312-316 S. New Jersey St., Indianapolis 4, Ind.

King Specialty Bag Corporation, 29-10 Hunters Point Ave., Long Island City 1, New York.

Seaman Bag Company, 2512 S. Damen Avenue, Chicago 8, Ill.

BARRELS (Potato)

Atlantic Cooperage Company, 52 Maple Street, Brewer, Maine.

BASKETS (Wire, Rubber Coated, Plastic Coated)

Washburn Company, 28 Union St., Worcester, Mass.

BIN LOADERS

Paramount Manufacturing Co., 1615 East Main St., Stockton, Calif.

Singer Mfg. Co., Smithville, Ohio.

Troyer Mfg. Co., Box 308, Smithville, Ohio.

BIN UNLOADERS

Troyer Mfg. Co., Box 308, Smithville, Ohio.

BROKERS (Potato Futures)

Merrill Lynch, Pierce, Fenner and Beane, 70 Pine St., New York 5, N. Y.

Merrill Lynch, Pierce, Fenner and Beane, Board of Trade Bldg. Chicago 4, Ill.

Merrill Lynch, Pierce, Fenner and Beane, 10 Post Office Square, Boston 9, Mass.

New York Mercantile Exchange, 6 Harrison St., New York 13, N. Y.

A. L. Stamm and Co., 120 Broadway, New York 5, N. Y. (Attention Harry H. Wolfe).

CAR FLOOR PAD

Jiffy Mfg. Co., 360 Florence Ave., Hillside, N. J.

CONVEYORS

Aeroglide Corporation, 510 Glenwood Ave., Raleigh, N. C.

Boggs Mfg. Co., Atlanta, N. Y.

Lockwood Graders, Gering, Neb.

Oliver Corp., 142 Duke St., York, Penna.

Paramount Manufacturing Co., 1615 East Main St., Stockton, Calif.

Troyer Mfg. Company, Box 308, Smithville, Ohio.

CRATES

Atlantic Cooperage Co., 52 Maple St., Brewer, Maine.

CULTIVATORS

Deere and Company, Moline, Ill.

CUTTERS

Lockwood Graders, Gering, Neb.

Albert E. Trexler, P.O. Lenhartsville, Pa.

Troyer Mfg. Company, Box 308, Smithville, Ohio.

DIGGERS (Elevator)

Agricultural Implement Division, 321 West O Street, Lincoln, Neb.

Champion Corp., 4714 Sheffield Ave., Hammond, Ind.

Deere and Company, Moline, Ill.

DISINFECTANTS (Seed)

E. I. duPont de Nemours & Co., Wilmington 98, Del.

Faesy and Besthoff, Inc., 325 Spring St., New York 13, N. Y.

DISTRIBUTORS (Fertilizers, Lime, etc.)

Deere and Company, Moline, Ill.

Phelps Dodge Refining Corp., 40 Wall St., New York 5, N. Y.

DRILLS (Grain and Grass)

Deere and Company, Moline, Ill.

Lockwood Graders, Inc., Gering, Nebr.

Paramount Manufacturing Co., 1615 East Main St., Stockton, Calif.

Singer Mfg. Co., Smithville, Ohio.

DRYERS

Aeroglide Corporation, 510 Glenwood Ave., Raleigh, North Carolina.

Lockwood Graders, Inc., Gering, Nebr.

Paramount Manufacturing Co., 1615 East Main St., Stockton, Calif.

FERTILIZERS

- Faessy and Besthoff, Inc., 325 Spring St., New York 13, N. Y.
 Phelps Dodge Refining Corp., 40 Wall St., New York 5, N. Y.
 Summers Fertilizer Co., 604 Stock Exchange Bldg., Baltimore 2, Md.
 Tennessee Corporation, 619 Grant Bldg., Atlanta 1, Ga.

FERTILIZER MACHINES

- Deere and Company, Moline, Ill.
 The Oliver Corporation, 142 N. Duke St., York, Penna.

FUNGICIDES

- Corona Chemical Division (Pittsburgh Plate Glass Co.), Pittsburgh 19, Pa.
 E. I. duPont de Nemours & Co., Wilmington 98, Del.
 Faessy and Besthoff, Inc., 325 Spring St., New York 13, N. Y.
 General Chemical Division, Allied Chemical and Dye Corp., 40 Rector St., New York 6, N. Y.
 Phelps Dodge Refining Corp., 40 Wall St., New York 5, N. Y.
 Rohm and Haas Co., Washington Square, Philadelphia 5, Pa.
 Tennessee Corporation, 619 Grant Bldg., Atlanta 1, Ga.

GRADERS & SORTERS

- Aeroglide Corporation, 510 Glenwood Avenue, Raleigh, N. C.
 Boggs Mfg. Co., Atlanta, N. Y.
 Maine Potato Growers, Presque Isle, Maine.
 Paramount Mfg. Co., 1615 East Main St., Stockton, Calif.
 Troyer Mfg. Company, Box 308, Smithville, Ohio.

HARROWS (Disc)

- Deere and Company, Moline, Ill.

HARROWS (Spring Tooth)

- Deere and Company, Moline, Ill.

HARVESTERS (POTATO)

- Paramount Mfg. Co., 1615 East Main St., Stockton, Calif.

HERBICIDES

- Faessy and Besthoff, Inc., 325 Spring St., New York 13, N. Y.
 General Chemical Division, Allied Chemical and Dye Corp., 40 Rector St., New York 6, N. Y.
 Pennsylvania Salt Mfg. Co., 1000 Widener Bldg., Philadelphia 7, Pa.

HORMONES

- Thompson Chemical Corporation, 3028 Locust St., St. Louis 3, Mo.

INSECTICIDES

- Corona Chemical Division, Pittsburgh Plate Glass Co., 2000 Grant Bldg., Pittsburgh 19, Pa.
 E. I. duPont de Nemours & Co., Wilmington 98, Del.
 Faessy and Besthoff, Inc., 325 Spring St., New York 13, N. Y.
 General Chemical Division, Allied Chemical and Dye Corp., 40 Rector St., New York 6, N. Y.
 Pennsylvania Salt Mfg. Co., 1000 Widener Building, Philadelphia 7, Pa.
 Rohm and Haas Co., West Washington Square, Philadelphia 5, Pa.
 Velsicol Corporation, 330 East Grand Ave., Chicago 11, Illinois.

INSPECTION TABLES

- Aeroglide Corporation, 510 Glenwood Ave., Raleigh, N. C.
 Paramount Manufacturing Co., 1615 East Main St., Stockton, Calif.

IRRIGATION & DRAINAGE EQUIPMENT**Couplings (Pipe)**

- Champion Corp., 4714 Sheffield Ave., Hammond, Ind.

Pipe (Portable Irrigation)

- Champion Corp., 4714 Sheffield Ave., Hammond, Ind.

Sprinklers

- National Rain Bird Sales and Engineering Corp., 627 North San Gabriel Ave., Azusa, Calif.

LIME AND LIMESTONE

- The Ohio Hydrate and Supply Co., Woodville, Ohio.

LOADING BOXES

- Dual Mfg. and Sales Co., 293 North Snelling Ave., St. Paul, Minn.

MINERALS

- Tennessee Corporation, 619 Grant Bldg., Atlanta 1, Ga.

MIST BLOWERS

- Hardie Mfg. Co., Mechanic St., Hudson, Mich.

PACKAGING EQUIPMENT

- Aeroglide Corp., 510 Glenwood Ave., Raleigh, N. C.
 Paramount Manufacturing Co., 1615 East Main St., Stockton, Calif.
 Troyer Mfg. Company, Box 308, Smithville, Ohio.

PICKERS & BAGGERS

- Dual Mfg. and Sales Co., 293 North Snelling Ave., St. Paul, Minn.
 Paramount Manufacturing Co., 1615 East Main St., Stockton, Calif.

PLANTERS

- Deere and Company, Moline, Ill.
 The Oliver Corp., 142 N. Duke St., York, Penna.

PLOWS (Tractor)

- Deere and Company, Moline, Ill.

POTATO SEED AND TABLE STOCK

- Clark Seed Farms, Richford, N. Y.

POTATO SALES AGENCIES

- Prince Edward Island Potato Marketing Board, Charlottetown, P.E.I., Canada.

PRE-COOLERS

- Aeroglide Corporation, 510 Glenwood Ave., Raleigh, N. C.

PUBLISHERS (Book on Potatoes)

- Macfarland Publications, 8 Elm St., Westfield, N. J.

SCALES

- Exact Weight Scale Co., 944 West Fifth Ave., Columbus 12, Ohio.

SCOOPS (Potato)

- Albert E. Trexler, Lenhartsville, Pa.

(Continued on Page 76)

SEEDS (Potato)

Canadian Dept. of Trade and Commerce, Ottawa, Ont.
 Clark Seed Farms, Richford, N. Y.
 Maine Development Association, Augusta, Maine.
 Maine Potato Growers, Presque Isle, Maine.
 Minnesota State Dept. of Agr., Seed Potato Certification, St. Paul, Minn.
 Nebraska Certified Potato Growers, Alliance, Neb.
 N. Y. Cooperative Seed Potato Ass'n, Inc., Georgetown, N. Y.
 North Dakota State Seed Dept., College Station, Fargo, N. D.
 South Dakota Potato Growers Association, Wadsworth, S. Dak.

SEED TREATING EQUIPMENT

Lockwood Graders, Gehring, Nebr., and Grand Forks, N. D.
 Paramount Manufacturing Co., 1615 E. Main St. Stockton, Calif.

SOIL TESTING OUTFITS

The Edwards Laboratory, 202 Milan Ave., P.O. Box 318, Norwalk, Ohio.

SPRAY DISCS

The Oliver Corporation, 142 North Duke St., York, Penna.

SPRAYERS & DUSTERS

Deere and Company, Moline, Ill.
 Hardie Mfg. Co., Mechanic St., Hudson, Mich.
 The Oliver Corporation, 182 North Duke St., York, Penna.
 Singer Mfg. Co., Smithville, Ohio.
 Troyer Mfg. Company, Box 308, Smithville, Ohio.

TRACTORS (Farm)

Deere and Company, Moline, Ill.

VINE KILLERS (Chemical)

Faesy and Besthoff, Inc., 325 Spring St., New York 13, N. Y.
 General Chemical Division, Allied Chemical and Dye Corp., 40 Rector St., New York 6, N. Y.
 Pennsylvania Salt Manufacturing Co., 1000 Widener Bldg., Philadelphia 7, Pa.

WAREHOUSE EQUIPMENT

Aeroglide Corporation, 510 Glenwood Ave., Raleigh, N. C.
 Paramount Manufacturing Co., 1615 East Main Street, Stockton, Calif.

WASHERS

Aeroglide Corporation, 510 Glenwood Ave., Raleigh, N. C.
 Lockwood Graders, Inc., Gering, Nebr., and Grand Forks, N. D.
 Paramount Manufacturing Co., 1615 East Main St., Stockton, Calif.

WAXERS

Aeroglide Corporation, 510 Glenwood Ave., Raleigh, N. C.
 Paramount Mfg. Co., 1615 East Main St., Stockton, Calif.

WAXING (Potatoes)

Lockwood Graders, Inc., Gering, Nebr., and Grand Forks, N. D.
 Paramount Manufacturing Co., 1615 East Main St., Stockton, Calif.

WEED KILLERS (Chemical)

E. I. duPont de Nemours & Co., Wilmington 98, Del.
 Faesy and Besthoff, Inc., 325 Spring St., New York 13, N. Y.
 General Chemical Division, Allied Chemical and Dye Corp., 40 Rector St., New York 6, N. Y.
 Pennsylvania Salt Mfg. Co., 1000 Widener Bldg. Bldg., Philadelphia 7, Pa.

WEED SPRAYERS

The Oliver Corporation, 142 North Duke St., York, Penna.

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